

Australasian

NOVEMBER/DECEMBER 1976. ISSUE 21, Vol. 7 No. 12

60c

MODEL RAILROAD

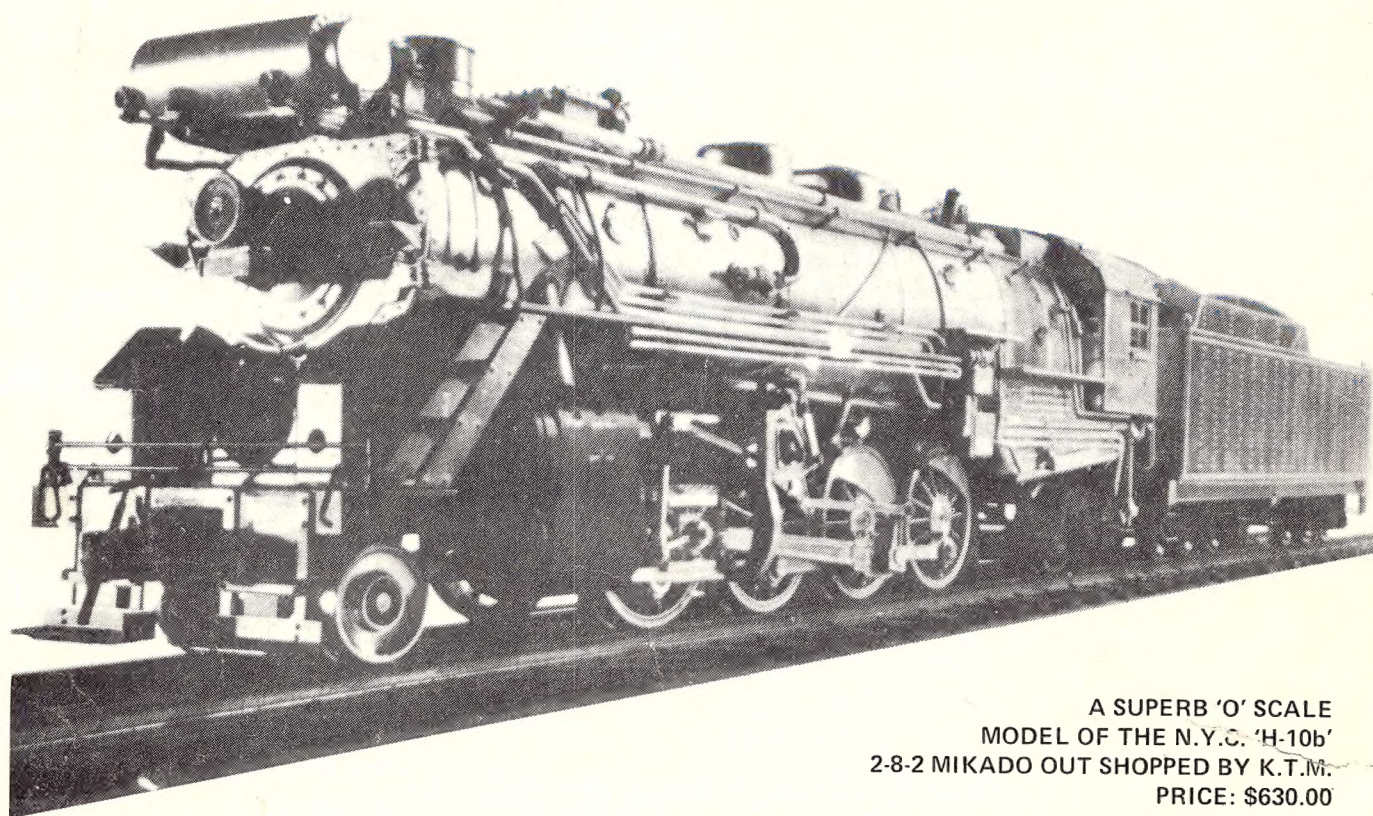
Magazine

AMRM

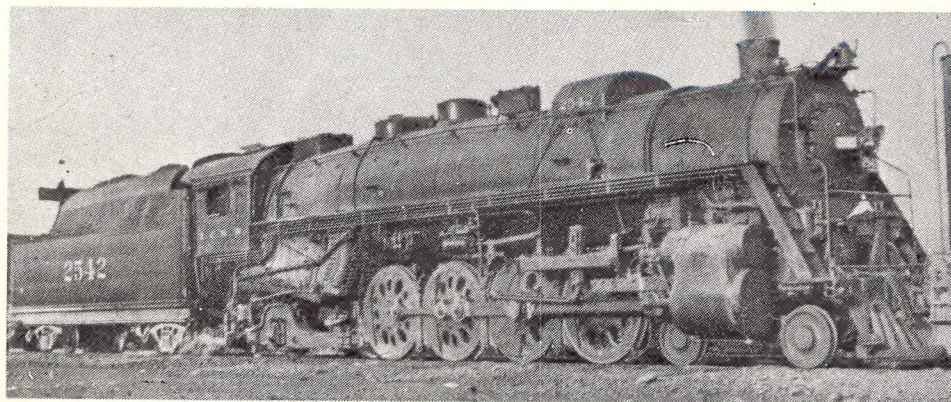
QUINTON RIVER RAILWAY
HOBBY PLANS

Registered for posting as a periodical — Category B.
Recommended retail price only.

NEW AND IMPORTANT DEVELOPMENTS —IN O & HO SCALE MOTIVE POWER.....



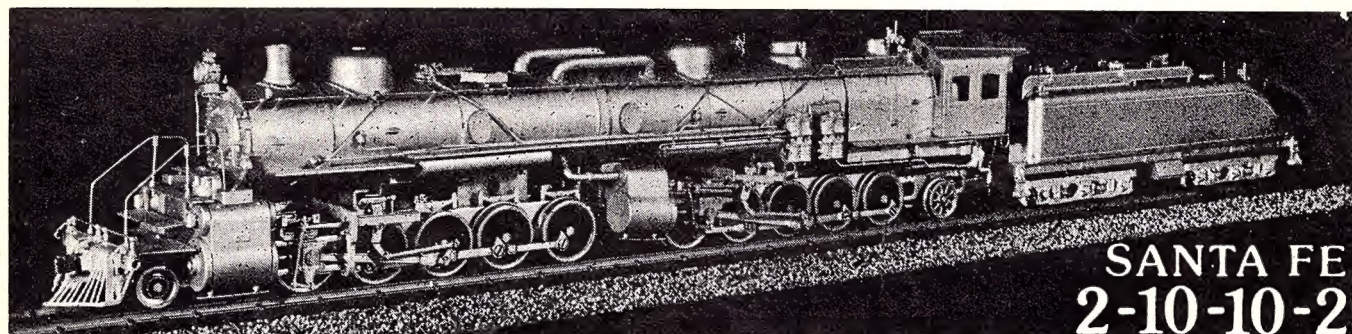
A SUPERB 'O' SCALE
MODEL OF THE N.Y.C. 'H-10b'
2-8-2 MIKADO OUT SHOPPED BY K.T.M.
PRICE: \$630.00



HO SCALE ILLINOIS
CENTRAL '2500'
SERIES 4-8-2
LOCO. & TENDER.
FROM THE SHOPS
OF HALLMARK
MODELS.
PRICE: \$192.95
(View shows prototy

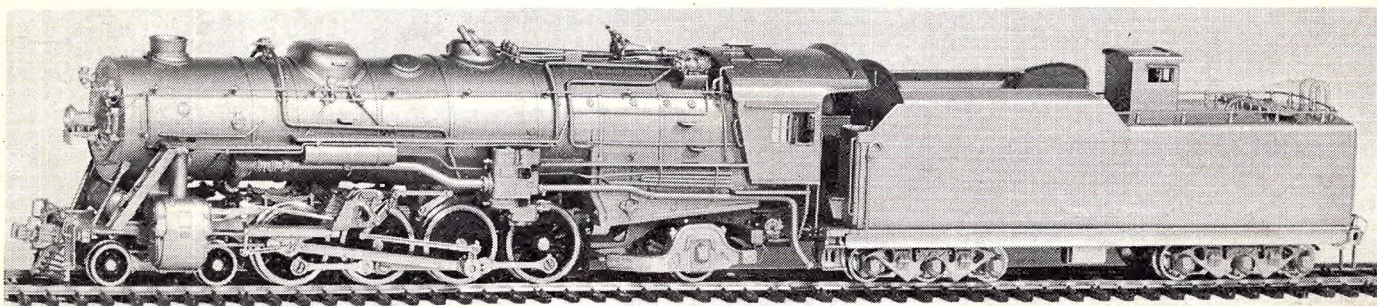
SOLE AGENT & IMPORTER
THE MODEL DOCKYARD PTY. LTD.
216-218 SWANSTON ST. MELBOURNE. PHONE: 663 3505

NEW AND IMPORTANT DEVELOPMENTS —IN HO SCALE MOTIVE POWER....

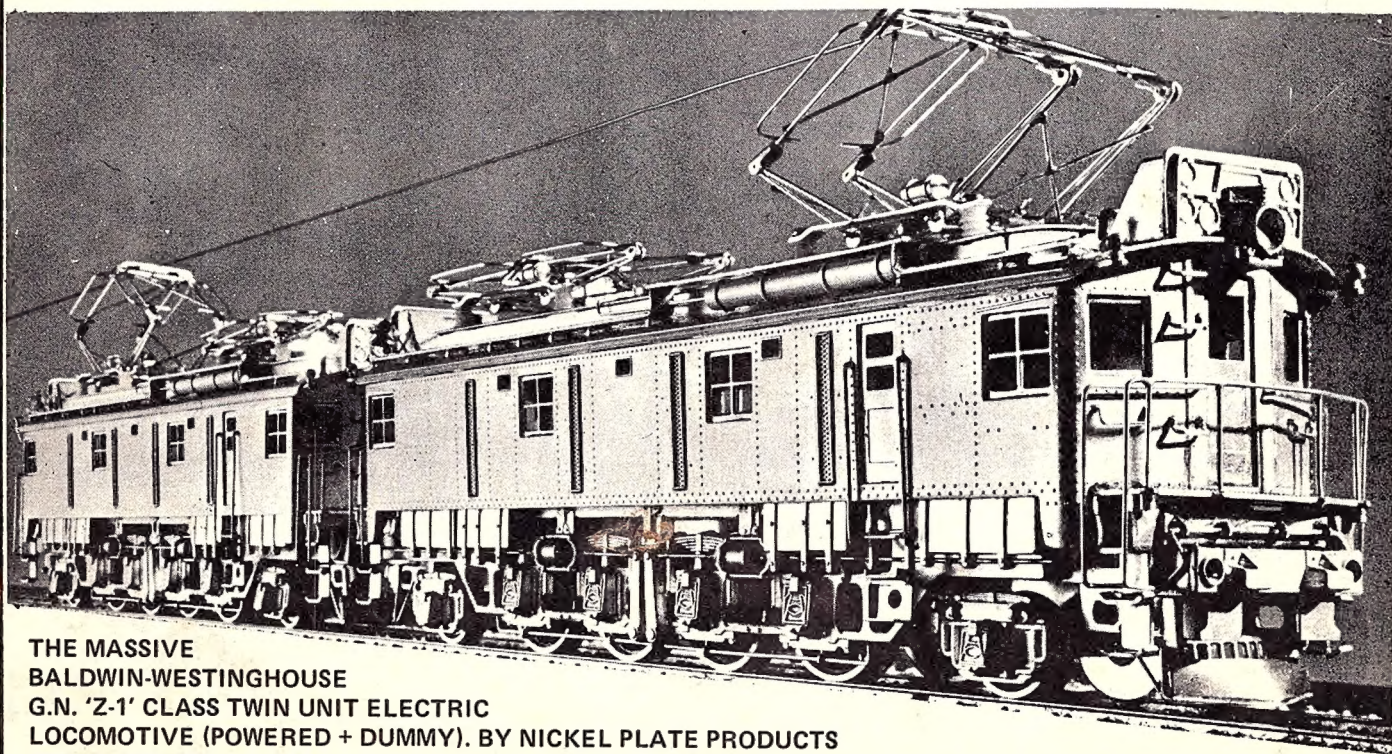


**SANTA FE
2-10-10-2**

FROM THE SHOPS OF WESTSIDE MODEL CO.THE MIGHTY '3000' SERIES BALDWIN COMPOUND IN HO SCALE. PRICE NOT AVAILABLE AT PRESS TIME.

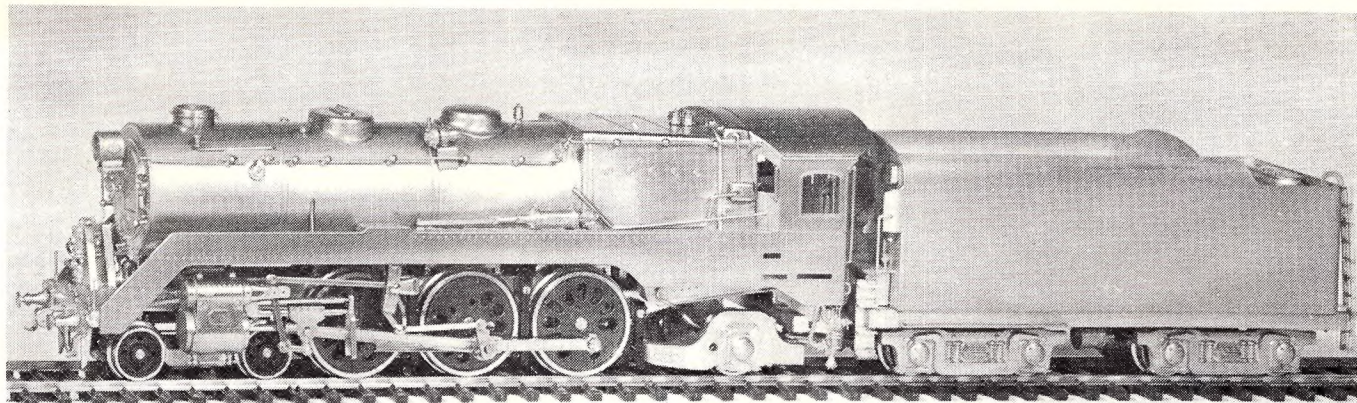


N. & W. 4-8-2 'K-3' SERIES (LATER SOLD TO D. & R.G., R.F. & P., AND W. & L.E.) LARGE BOILERED LOCOMOTIVE. FROM SUNSET. PRICE: \$157.00.

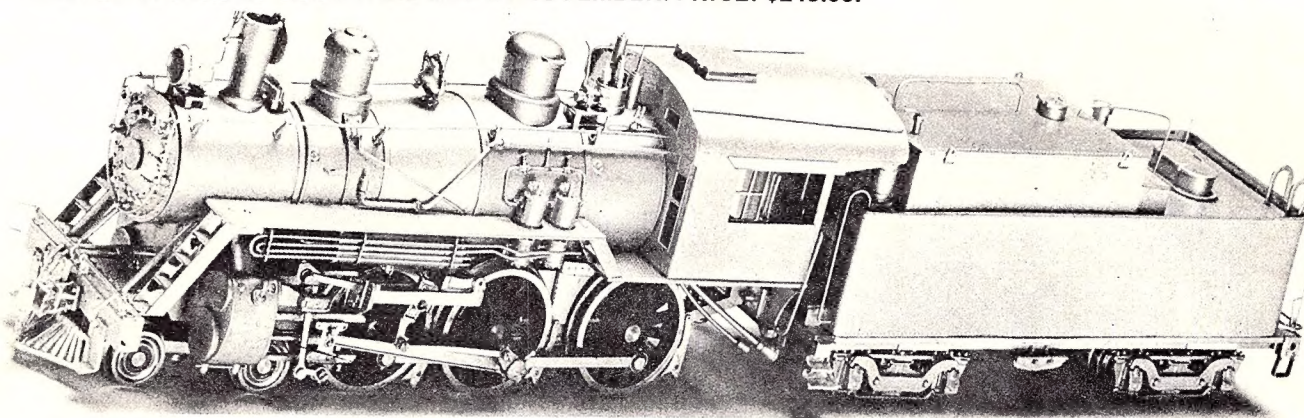


THE MASSIVE
BALDWIN-WESTINGHOUSE
G.N. 'Z-1' CLASS TWIN UNIT ELECTRIC
LOCOMOTIVE (POWERED + DUMMY). BY NICKEL PLATE PRODUCTS
PRICE: \$274.95

NEW AND IMPORTANT DEVELOPMENTS — IN HO SCALE MOTIVE POWER



A SNEAK PREVIEW OF THE FIRST PRODUCTION SAMPLE N.S.W.G.R. 'C38' CLASS PACIFIC LOCOMOTIVE — LIMITED STOCKS OF WHICH ARE DUE IN NOVEMBER. PRICE: \$245.00.



FROM 'UNITED'. . . THE L. & A. 4-6-0 'HUSTLER'. PRICE: \$151.75.

Other News from the Dockyard . . .

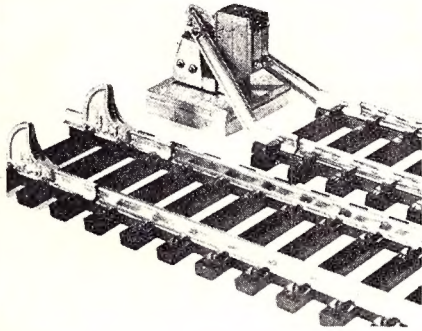
Now available through all our outlets is a handy Grease Gun. This has a plastic syringe with a 1" stainless steel point and comes complete with dust cap and cleaning wire @ \$2.40 each. . . By early November, 'United' are scheduled to deliver more "B" Class Climax Locomotive, as well as first stocks of the new M.P. 'P-73' Pacific Locomotive. . . . Next arrival from Hallmark Models will be the C. & O. 2-8-2 'K-2' Series, to be followed by the A.T. & S.F. 2-10-4 "Madam Queen". Whilst production in 1977 will include the Colorado Midland 4-6-0 and 2-8-0 Locomotives. . . . Tenshodo's new D. & R.G.W. 4-8-2 3-Cylinder Mountain Class Locomotive will be in stock by the time these notes appear in print. This will come painted, lettered and with pre-WWII herald. Meantime, the works have now put in hand a re-run of the G.N. 2-8-8-0 'N-3' Series Locomotive. . . . From Nickel Plate Products, the long awaited New York Central 4-8-4 'Niagara' Locomotives are due to arrive late September. These will come painted and soon after, we expect to be offering stocks of the Wabash 'J-1' Pacific. . . . From Westside Model Co, stocks due to arrive before December include: P.R.R. 4-6-0 'G-5' Series, S.P. 4-4-2 'A-6' Daylight (painted), HO N 3 D. & R.G.W. No. 50 Diesel Switcher (with outside frame), S.P. 'P-1' 9,000 gal. Square Oil Tender, B. & O. Vanderbilt Coal Tender and S.P. 'P-4' & 'T-31' 10,000 gal. Vanderbilt Oil Tender. . . . The U.P. No. 51 Gas-turbine Locomotives will be in stock by early November, in two versions, with Square or Vanderbilt Tender. As anticipated, fans of the big U.P. gas-turbine era have snapped up

the first arrivals in this series, the No. 61 Gas-turbine Locomotive. To come later will be the No. 50 Locomotive, as well as the massive 8,500 H.P. Turbine. This will have twin powered units, castings by Utah Pacific and will come equipped with sound. . . . Coming up from Key Imports are the A.T. & S.F. 4-8-4 '3751' Series Locomotive. Meantime, we expect to have the D. & R.G.W. 'K-59' 2-8-2 and S.P. 'M-21' series Mogul Locomotives. . . . For 24" gauge fans working in 0 scale, the On2 S.R. & R.L. No. 19 Coaches are expected in stock by early October. . . . Forthcoming deliveries from Sunset Models will include the D. & R.G.W. M69' and W.& L.E. 4-8-2's, as well as the D. & S.L. 2-8-2 Locomotive. Also, the On3 D. & R.G.W. 'C-16' 2-8-0 Locomotive. Most, if not all, by Christmas, 1976. . . . First stocks of Northwest Short Lines HO/HO N3 Driver Quartering Tool are now available. In early October the 0-6-0 USRA Switchers are expected, to be followed shortly after by the 10,000 gal. Logging Tank Car. . . . To enable the construction of Code 100 left and right hand double junctions, in conjunction with No. 6 Turnouts, Shinohara are now introducing a 9° 30' Diamond Crossing, in both left and right hand versions. . . . Due in October are three new accessory kits, all with slow motion mechanisms: 2 Aspect Semaphore Signal, Wig Wag Level Crossing Signal and Boom Gate. Stocks will be available through all our outlets. . . . Large, new Athearn stocks are due in November. For covering Price List send large, stamped S.A.E. . . .

SOLE AGENT & IMPORTER
THE MODEL DOCKYARD PTY. LTD.
216-218 SWANSTON ST. MELBOURNE. PHONE: 663 3505

Other News from the Dockyard . . .

Continued from page 4 . . .



HO white metal Wheel Stop and Bumper Post Kits are now available to take care of end o'track requirements. The Bumper Post Kit @ \$1.90 each and the Wheel Stops @ \$1.20 per 2 pair. Stocks are available through all our outlets for Shinohara Track. . . . For those interested in narrow gauge and the American prototype in particular, the new publication "Narrow Gauge & Short Line Gazette" will be required reading. Published bi-monthly in the U.S.A., our first copies will be available by the time these notes appear in print. . . . More H. & M. Power Packs are now available: Clipper @ \$30.85, Duette @ \$47.55 and Powermaster @ \$56.35. . . For those HO gaugers working to N.S.W.G.R. prototype, we are still holding limited stocks of 'Tin Hare' Rail Motor @ \$79.95 and '79' Class Diesel Shunter @ \$107.50.

THE MODEL DOCKYARD Pty Ltd,
216-218 Swanston Street,
MELBOURNE

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ORMOND, Vic 3204

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For:
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How To Do It Books for Models.

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Looking for a Model Railway Association?
Why not join the Southern Cross Model
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Write for application form to -

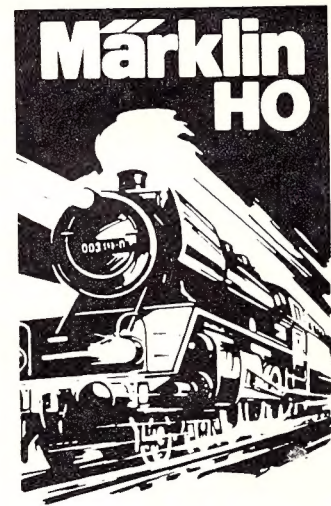
The Secretary.
S.C.M.R.A.
P.O.Box 84
Miller. 2168

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MECHANOTEHNIKA
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also Hama two rail 12v D.C. Marklin locos.

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(03) 35 8519

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LINING TAPE; MATT RED, YELLOW, BLACK, WHITE
1/64th, 1/32, 1/16, 3/32 ins wide: \$1.20 roll
1/8th ins wide: \$1.35 roll

METALLIC GOLD, METALLIC SILVER
1/64, 1/32, 1/16, 3/32 ins wide: \$1.45 roll
1/8th ins wide: \$1.65 roll

FLEXIGRIT FINE FINISHING FILM (RE-USABLE)
60 cents, Packet Five Different Grades.

KJH "VLX" BODY KIT \$4.50 ea

PMH 2BP BOGIES FOR ABOVE KIT \$1.15 pair.

PRICES HOLD WHILE STOCKS LAST

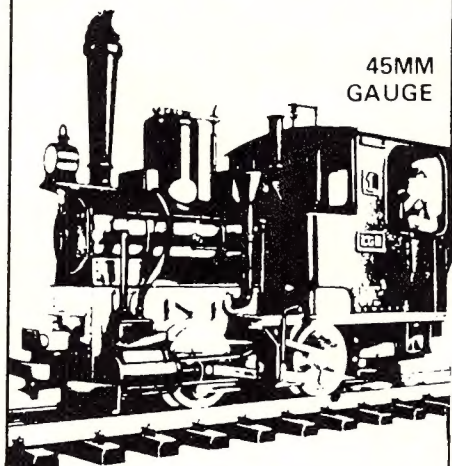
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WE HAVE EXTENSIVE STOCKS OF
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Current stock/Price lists 30c stamps. Please
specify if HO/OO or N lists required.

P.J.P. PRODUCTIONS

Since 1938 (Daly St)
Box 14, Post Office,
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3437
Phone (054) 28 2170

*We are currently concentrating on clearing
our back orders and custom work.*

*Our intention is to then build up
substantial stocks of new models prior to
their release, in order that we can keep
the delivery delays down.*

*In the meantime we expect to issue
several limited runs of various items of
rolling stock. These will not be advertised
and if you wish to be notified of
availability, please forward several
S.S.A.E.'s which will be returned to you
as the models are available.*

WORKSHOP

5

MODELS

P.O. Box 24, BEROWRA HEIGHTS,
N.S.W. 2082
Tel. (02) 456-2668

Personal callers by appointment only.

Train World

Hobby Speciality Shop

Other brands covering O, HO/OO & N gauges available are:—

Walthers — Ulrich — Kadee — Tyco — Model Power — Quality Craft Models — Roller Bearing Models — Ambroid — Athern —
Pola — Herpa — Hornby — Lima — Peco — Wren — A.H.M. — Bachman — H&M — Zimble P/L — Rivarossi.

For the armchair modeller, enthusiast or rail buff: "Train World" has a comprehensive range of audio-visual goods. These
include:—

Books-Slides-Recordings — from Australia, U.K. and U.S.A.

Also "Train World" are licensed secondhand dealers and offer a wide range of used goods at highly competitive prices IN ALL
GAUGES, for both collectors and modellers.

Call in and see for yourself:—

TRAIN WORLD,
615 Hawthorn Road,
East Brighton, Victoria, 3187
(near North Road).

Phones: 58-5546 A.H. 92-5449

Train World is open:—

Monday to Thursday 9 am. to 5.30 pm.

Friday 9 am. to 8 pm.

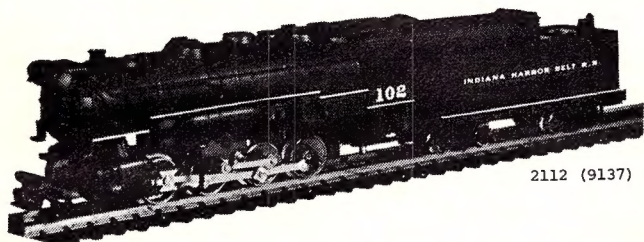
Saturday 9 am. to 12.30 pm.

or send a S.S.A.E. for a current listing of goods available in one or more of the following areas:—

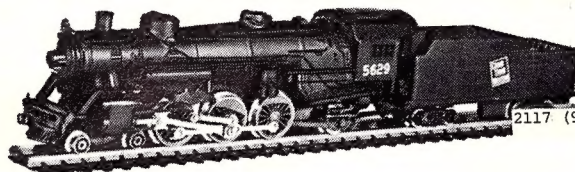
U.S. prototype-European prototype-Used goods-Audio Visual.

Country and interstate customers welcome:

Try our FAST mail order service — SAME DAY MAIL OUT.



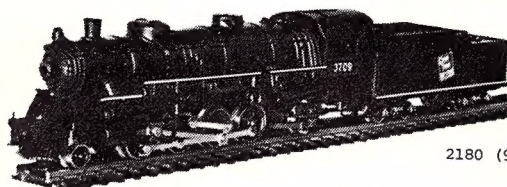
2112 (9137)



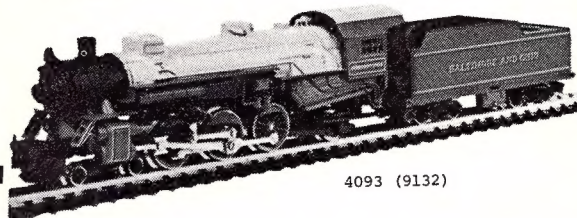
2117 (9131)

American steam locomotives

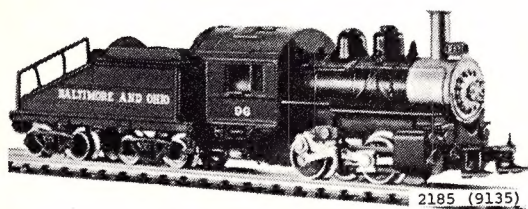
- 2112 (9134) Indiana Harbor Belt, 0-8-0
Heavy Switcher with tender, working
headlight, length 140mm - - - - - \$32.50
- 2117 (9131) USRA Pacific, 4-6-2 locomotive
with tender, working headlight. 155mm - - - \$39.95
- 2180 (9133) USRA "Mikado", 2-8-2 locomotive
with tender, headlight, 160mm - - - - - \$39.95
- 2187 (9137) B. & O. 0-4-0 Tank with
operating valve gear, 64mm long - - - - - \$25.00



2180 (9133)



4093 (9132)



2185 (9135)

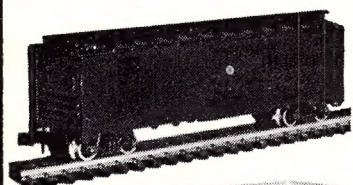
N

- 2185 (9135) B. & O. 0-4-0 Loco
with Slope Back Tender - - - - - \$27.50
- 4093 (9132) B. & O. Pacific Loco with
tender - Blue & Grey - - - - - \$35.00

Freight cars

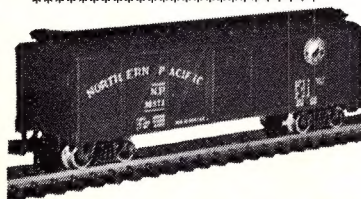
Atlas numbers first, Rivarossi numbers in brackets

SOME ITEMS FROM THE RANGE



- | | | | |
|-------------|--------------------------------------|-----------|--------|
| 2265 (9360) | Chemical Tank Car - Dupont | - - - - - | \$2.75 |
| 2266 (9361) | Chemical Tank Car - Hooker | - - - - - | \$2.75 |
| 2267 (9362) | Chemical Tank Car - UTLX | - - - - - | \$2.75 |
| 2361 (9345) | Wooden Box Car - Northern Pacific | - - - - - | \$2.50 |
| 2362 (9346) | Wooden Box Car - D. & R. G. W. | - - - - - | \$2.50 |
| 2373 (9342) | Flat Car - Great Northern | - - - - - | \$2.50 |
| 2374 (9343) | Flat Car - R. D. G. | - - - - - | \$2.50 |
| 2381 (9350) | Standard Box Car - Penn. Central | - - - - - | \$2.50 |
| 2382 (9351) | Standard Box Car - Canadian National | - - - - - | \$2.50 |
| 2383 (9352) | Standard Box Car - New Haven | - - - - - | \$2.50 |
| 2384 (9355) | Standard Box Car - Pacemaker | - - - - - | \$2.50 |
| 2391 (9355) | Refrigerator Car - Illinois Central | - - - - - | \$2.50 |
| 2392 (9356) | Refrigerator Car - El Capitan | - - - - - | \$2.50 |
| 2393 (9357) | Refrigerator Car - Railway Express | - - - - - | \$2.50 |

COLOUR CATALOGUE - \$3.75
Post \$1.25
NEW LINES 1976 --- \$ 1.25
Post .40



- | | | | |
|-------------|------------------------------|-----------|--------|
| 2401 (9330) | Gondola - Boston & Maine | - - - - - | \$2.50 |
| 2402 (9331) | Gondola - Union Pacific | - - - - - | \$2.50 |
| 2403 (9332) | Gondola - Central New Jersey | - - - - - | \$2.50 |
| 2404 (9333) | Gondola - Southern | - - - - - | \$2.50 |



2187 (9137)



Prices in this advertisement are
those of Australian Model Craft Co.
Prices of Stockists are at their
discretion.

American diesel locomotives

- EMD E8 Diesel Electric with operating headlight ...\$24.95
- | | |
|-----------------------------------|---------------------------|
| 2101 (9150) Santa Fe | 2102 (9151) B. & O. |
| 2103 (9152) Pennsylvania | 2104 (9153) Union Pacific |
| 2105 (9154) Chicago & Nth Western | |
- Fairbanks Morse Diesel Locomotive, Powered Unit ...\$22.50
- | | |
|------------------------------|---------------------------|
| 2121 (9140) Santa Fe | 2122 (9141) Union Pacific |
| 2123 (9142) Milwaukee | 2124 (9143) Pennsylvania |
| 2125 (9144) Southern Pacific | |
- Fairbanks Morse Unpowered Units\$ 7.95
- 2131 to 2135 corresponding road names to match
powered units

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*from good hobby shops
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VALLEY TOYWORLD

OUR RANGE COVERS:—

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N GAUGE, ATLAS-RIVAROSSA, MINITRIX, LIFELIKE, PECO, BACHMANN, LIMA.

SOME OF OUR KITS:—

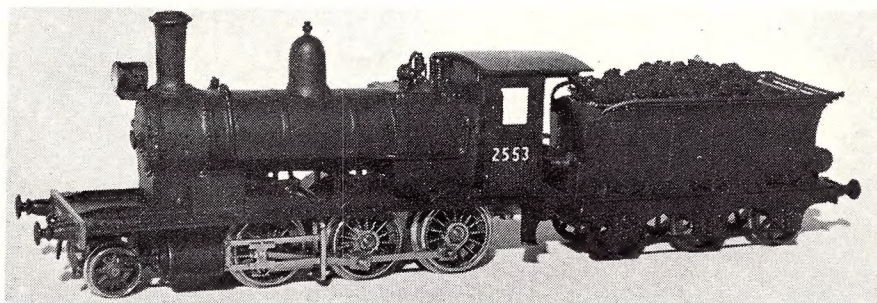
KIBRI — POLA — VOLLMER — VAU-PE — JOUEF — AIRFIX — LIFELIKE — RATIO —
ROUNDHOUSE — TYCO.

CUSTOMER SERVICE IS OUR AIM — IF WE HAVENT GOT IT, WE WILL TRY TO GET IT!

CALL IN AND SEE OUR RANGE. REPAIRS GLADLY DONE.

VALLEY CENTRE PLAZA, BRUNSWICK ST. 4006 Ph. 521005

N.S.W.G.R. Z25 Class Loco & Tender.



Kits for this neat little loco and tender will become available in mid November. White-metal castings with plated rods and crossheads. Supplied with Romford driving wheels and gears and with a K's motor. Kits are complete with screws and a step by step assembly instruction sheet.

PRICE: \$63.93 plus 5% postage and package.

TRY OUR SPECIAL LOW-MELTING POINT solder for assembling white-metal kits. A 12 volt AC/DC soldering iron, which connects to your layout transformer plus 2 sticks of l.m.p. solder will cost \$5.20 plus \$1.00 package and post. Instruction sheet included.

Send S.S.A.E. for price list of our other products.

F.S.M. Pty Ltd. P.O. Box 169, FORESTVILLE, N.S.W. 2087.



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POSTAGE:
Under \$10 add 75c
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Airmail add extra \$2.00
Registered add extra \$2.00
Overseas add extra \$2.00

KADEE N GAUGE

Available end of November will be the "Spirit of '76" N Box Cars. There are 13 different colour schemes — one for each of the original states and a '76 Caboose.

Spirit of '76 Box Cars. . .ea \$5.25
Spirit of '76 Caboose. . .ea \$5.50
Set of 13 Box Cars, 1 Caboose \$68.00
(All the above with Rapido couplers)
These will be collectors items. . .Numbers are limited.
N couplers, assembled. . .2 pair \$2.20
or 5 packets for \$10.50
N uncouplers \$1.65
N Height Gauge \$3.05
N couplers include truck springs. Kadee suggest that they be placed on the end of one axle per bogie to assist in efficient coupling and uncoupling of N gauge vehicles.

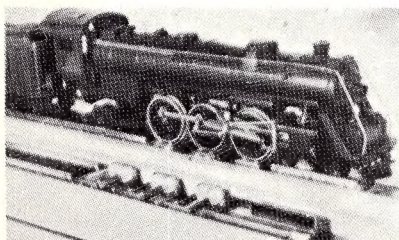
KADEE HO GAUGE

No. 5 couplers. . .packet \$1.75
Nos. 4, 6, 7, 8, 9, 16. . .packet \$1.85
No 11 "Old Timer" 3/4 size \$1.80
No 14 for HO N3. . .packet \$1.80
Any 5 packets \$8.50
Any 10 packets \$16.25
Uncoupler — Under Track Mounting \$1.50
Uncoupler — Between Rails Mounting \$1.65
Uncoupler Glueing Jig \$1.40
Andrews, Archbar or Bettendorf Trucks
All per pair \$1.85
Spring Pic \$1.00
HO Track Gauge \$1.20

PRECISION HO LOCOMOTIVE TEST UNIT

L.T. 200-8. Will handle anything from a 4-8-8-4 Big Boy to an 0-4-0 switcher, and diesels up to 8 driven axles. Changeover is made by repositioning the free sliding roller assemblies — no screws or tools used. Illustrated is the unit set up for a 4-6-2 with a similar unit in the foreground. The test unit allows stationary operation of steam and diesel type locomotives for display, break-in or adjustments. Construction is of seasoned basswood, nickel plated brass, nickel silver, stainless steel and nylon. Price is \$62.50 post free.

Also available early 1977 will be a Rivet Making Tool. Priced at \$33.00. Write for details.



LIMA CHRISTMAS SPECIALS

NSW C38 Black version HO
Usually \$45 special at \$38.00
Or buy 1 Black and 1 Green C38
Usually \$90 special at \$75.00
NSW 44 Class diesel HO
Usually \$21.75 special at \$19.50
'Indian Pacific' Diner
Usually \$4.50 special at \$3.95
'Southern Aurora' Sleeper
Usually \$5.50 special at \$4.80

BOOKS FROM CARSTENS.

A Century of Model Trains. 208 pages with 450 photos, 187 in colour. History of model trains from 1875-1975. . . \$45.00
Electronic Handbook Vol. 1 \$3.00
Electronic Handbook Vol. 11 \$3.00
Railroad Atlas of the U.S.A. \$4.00

POINT MOTORS. Choose from:-

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Kumata each \$2.95
Peco each \$2.15

BRASS

HO items expected — order early to avoid missing out — only limited numbers are imported into Australia.

U.P. '51' Gas Turbine with original tender. Delivery about December. Price approx \$225.00
U.P. 8500hp 3 Unit Gas Turbine, fitted with sound. Delivery first half of 1977. Price: TBA
NSWGR C38, Unstreamlined, delivery December. Price \$245.00.
Berg's brass D57, should be in stock when this ad. appears. Price: TBA.
Berg's Brass NSWGR PHG guards van. Price: \$67.50.
NSWGR '79' class diesel. Price: \$107.50.
Westside S.P. G.S.4 4-8-4 Streamlined loco in Daylight colours. Priced at \$309.50.
Tenshodo 'Great Northern' F8 2-8-0. Painted in G.N. green colours, and priced at \$260.50.

THE MAIL ORDER SPECIALISTS —

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P.O. Box 144 registered at 14 Argyle Street, Fawkner. Items above are a selection only. Any other enquiries, please write. Licensed secondhand dealer.

ON THE AUSTRALIAN SCENE

PMH N.S.W.G.R. BOGIES. HO

2AD 7 foot Pass. pr. \$1.15
2AT Guards Van pr. \$1.15
2CD Top Hanger pr. \$1.15
2CH Bottom Hanger pr. \$1.15
3AG 6 Wheel Pass. pr. \$1.35
K Wagon Underframe ea. .65
Berg's 10.5mm spoked wheels, per axle .60

R.T.M. DECALS

N.S.W. Loco Numbers Sheet .50
N.S.W. Pas. Car Lettering, sheet .40

B.J. SCALE MODELS. HO

South Australian Railways small coal stage as reviewed in July/August A.M.R.M. \$2.00

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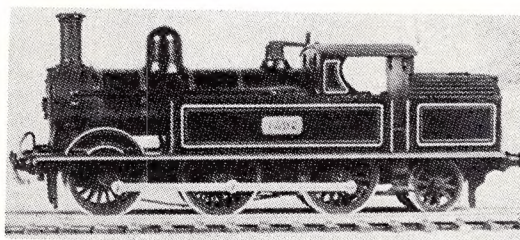
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A.M.R.M.

NOVEMBER/DECEMBER 1976
Issue 81. Vol. 7 No. 12
AT ISSN 0045-009X

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DEADLINES: For all copy is as follows:-
 January/February 1977, 15th December,
 1976; March/April 1977, 16th February,
 1977.

ON THE COVER: DD17-1046 ascends the
 middle road of the Great Zig-Zag, 1st
 August, 1976. Photo: Keith Bailey.

QUINTON RIVER RAILWAY
WEATHERING BUILDINGS
SCENIC ROUTE
TIMBER RAILWAYS
REMOTING A 44 CLASS
GLUEING ASSEMBLY JIB
INTERESTED IN TRACKWORK
AIRFIX ROUNDHOUSE
PROTOTYPE PLAN: V.R. FX hopper
PROTOTYPE PLAN: Q.R. 'T' wagon
AUTOMATIC LEVEL CROSSINGS
AMRM NEWS
COUPLER POCKET MARKING GAUGE
1976 SYDNEY MODEL RAILWAY EXHIBITION
MODELLING THE METRIC MUDDLE
PROTOTYPE PLAN: C.R. 'GB/GBX' wagon
S.C.M.R.A. NEWS — MAILBAG — MARKETPLACE
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COMMENT

With the festive season nearly upon us so
 too will be the annual influx of modellers to
 the hobby. It is inevitable that a good per-
 centage of recipients of Christmas train sets
 will tire of them after a while but there is
 always the person who will carry this gift into
 his or her full time hobby.

It is up to us, the established modeller, to
 encourage these novices — to assist, to guide
 and to pass on our knowledge for the better-
 ment of the hobby.

I hope that over the past 12 months we
 of the magazine have been able to assist you in
 some small way. My thanks must go to the
 many persons who have submitted the articles
 over this period and likewise to those who have
 yet to reach publication, thereby assuring us
 of continuance throughout 1977. The maga-
 zine is growing in strength due to your assist-
 ance.

This being the last editorial for 1976 it is
 only appropriate that I give you a small
 Christmas present of sorts.

To do so I must refer back to my comments
 in the May/June issue in which I discussed
 the problem of repainted models to represent
 Australian prototype.

The response to this subject was somewhat
 overwhelming although, in all fairness, there

were three who believe we are wasting our
 time.

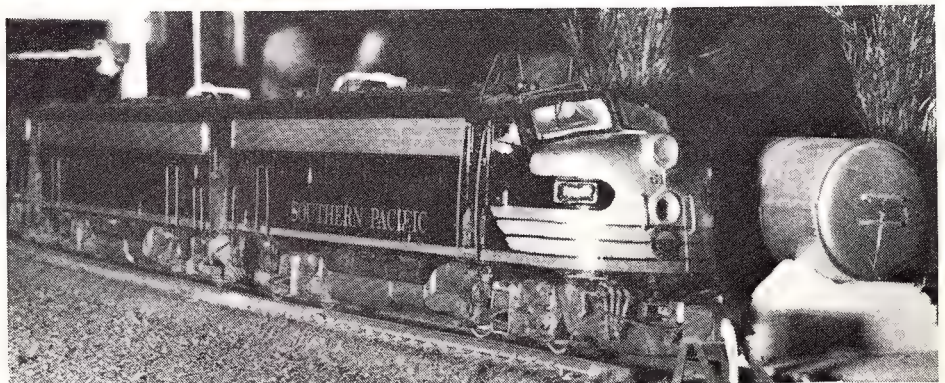
As promised in that editorial we have, in
 your interest, written to one of the major
 overseas manufacturers, putting our case as
 clear and precise as possible.

We have now received acknowledgement
 from the company's Australian marketing
 agents. They admit that insufficient research
 had been undertaken, particularly in respect of
 the company's latest models, and assure us
 that future models will be thoroughly
 researched prior to production. They also
 advise that, upon suggestions made by us, the
 latest locomotive could well see a major
 structural change by late 1977, to the benefit
 of modellers in NSW, Victoria, South Australia
 and Western Australia. No promises are given,
 but they are prepared to recommend this to
 the parent company in mid-November.

This is all I am able to say at this time as
 the matter is still pending discussions between
 the agents and this magazine. The final
 outcome will be made public as soon as we have
 further information. Needless to say our cries
 have not fallen on deaf ears. We (Australian
 Modellers) have been recognised at last, thanks
 to all those who took the time to write and
 support the cause.

In closing may I take this opportunity on
 behalf of the editorial staff to wish each and
 every one of you a truly Merry Christmas and
 a peaceful and prosperous New Year.

Allan Brown.



*Southern Pacific's 'Black Widows' F7's pose in the fueling area of the exhibition layout of
 Prospect Model Railway Club. Photo: Graham Ball.*

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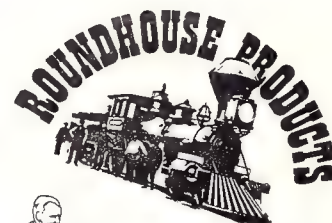
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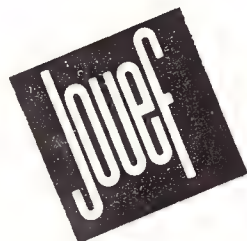
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Hornby Railways



N GAUGE



Lima



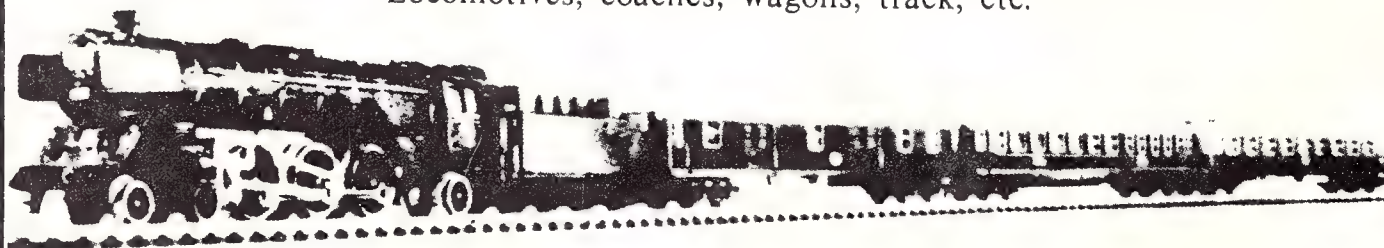
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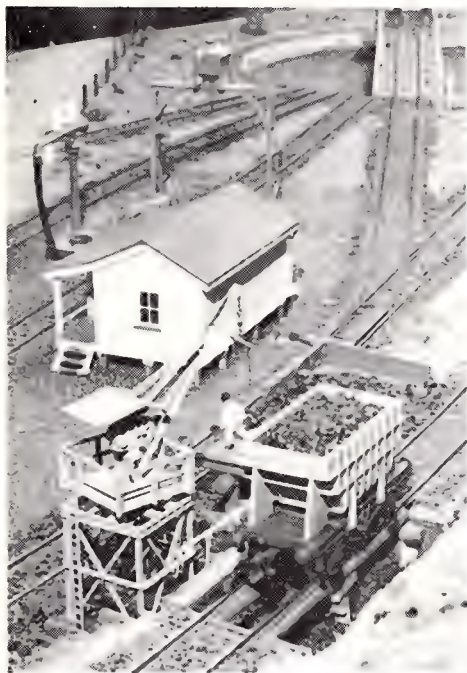


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QUINTON RIVER RAILWAY

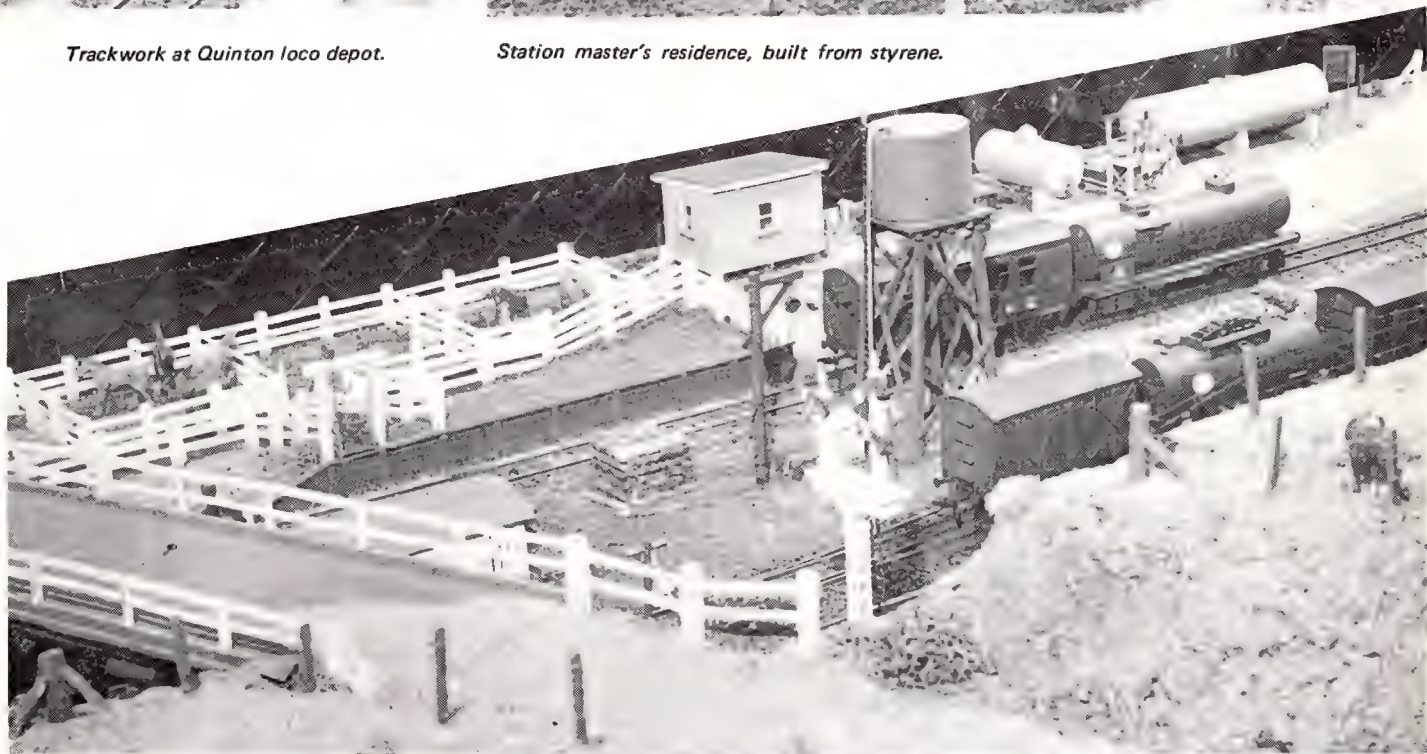
Built and described by Ron Everingham



Trackwork at Quinton loco depot.



Station master's residence, built from styrene.



*Above:
Revenue producers for the Quinton
River Railway.*

*Right:
Quinton goods shed with station
building in the background.*





Scenery

The background scene is represented by higher ground in which some earth excavation was necessary to construct the railway. This background has been modelled with expanded foam covered with a thin layer of paper mache'. It takes anything up to two weeks for the mache' to dry and then it is painted in earth colours followed by the application of the usual scenic materials. A short tunnel connects the three hidden storage tracks to the main section of the layout. To create an effect of greater distance, a road bridge spans the main line between the station and loco depot areas.

Locos and Rolling Stock

These mainly consist of various kits and brand equipment modified and repainted to resemble Q.R. The ultimate aim is to scratchbuild waggons etc. from plans and hopefully a loco some day.

Control Panel

This unit, which contains the power supplies for the two controllers and point motors, can be plugged into either the front or rear of the baseboard. The rear connection was necessary for operation at the hobby show. Seven section switches allow flexibility for shunting and timetable operations when worked by two operators. All points and the turntable are electrically controlled from this panel.

Conclusion

The building and operation of this layout has been very enjoyable, and hopefully this article can give some ideas to other enthusiasts who are planning to construct a model railway. Many thanks to Graham Ball for providing most of the model photography.

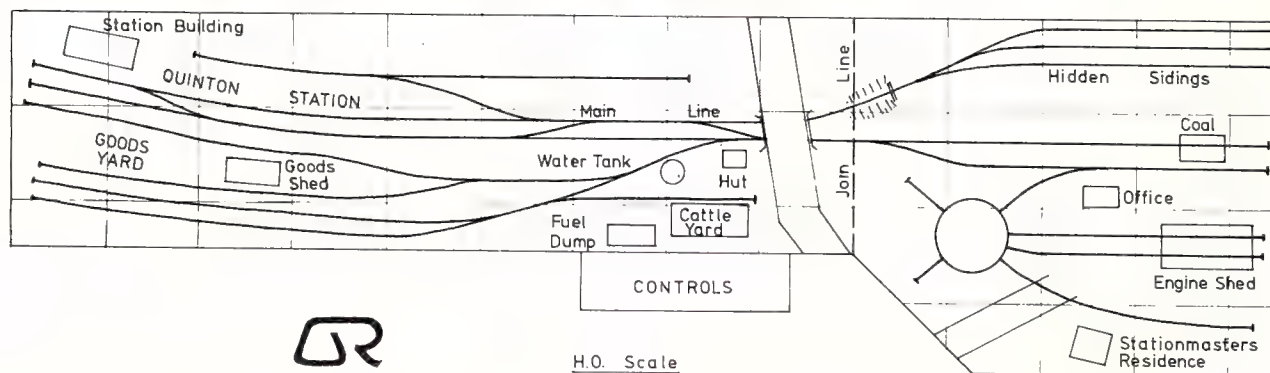
Above:

Q.R. No. 3 takes on coal before commencing the days duties.

Left: Fettle's hut beside the main line.



Quinton River Railway & Mining Co. Ltd.



Size of squares
Width
Length

H.O. Scale
ft ins. mm
1'0" 300
3'8" 1118
12'6" 3810

The Quinton River Railway is a point to point 4mm/foot layout in which I have endeavoured to capture some of the atmosphere of the Queensland Railways. This layout was operated at the 1975 Brisbane Hobby Show and being of basically the shunting type design, a lot of hard work on the controls was the order of the day for interesting operation. With the grateful assistance of Peter Turner-Jones (another railway modeller), trains were moving for most of the duration of the six day show.

The main purpose however for the layout is for realistic operation at home and with a limited space available the point to point method was decided on. Many enjoyable hours have been spent building the "Quinton Railway", and the following brief description of some of the methods I have used, could be of interest to other readers.

Base/board and Track

The baseboard consists of two sections to allow access for a comfortable working position during construction and maintenance of the relay solenoid type point motors. This has served a twofold purpose making the layout portable if required. Trackwork is PECO code 100 flexible combined with SHINOHARA live frog points. I find these points give excellent operation when the electrical connection for the moving point blades is combined with the point motor switch. This method means a lot of extra wiring with the reward being minimum use of the "human crane".

A scratchbuilt turntable, remotely controlled with a 2 rpm motor/gearbox, services the loco depot. For a pleasing appearance the track has been ballasted and the rails painted with Humbrol "Track Colour".

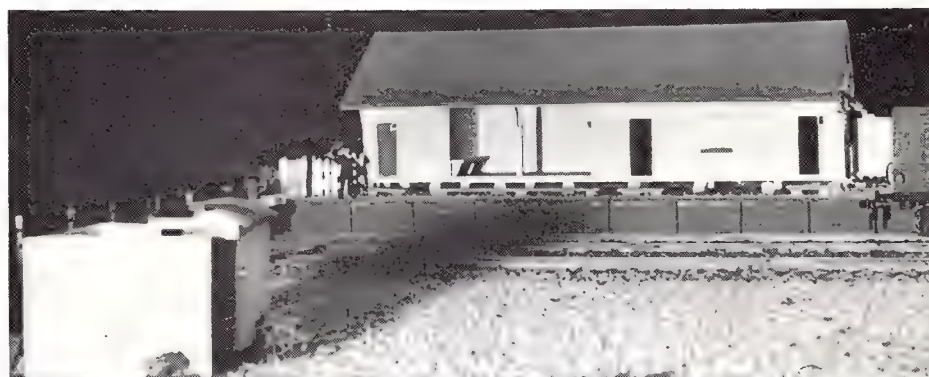
Buildings, Structures Etc.

These have all been scratchbuilt with styrene, wood and aluminium sheet to resemble Queensland Railways prototype. The station building and goods shed were scaled from photographs taken at Pittsworth Qld., while the others are typical in the Queensland scene. On this layout all the tracks eventually come to an end, so quite a few buffer stops were fabricated from timber. These stops have prevented what could have been expensive mishaps on a couple of occasions.



Passenger trains at Quinton.

Late afternoon shadows at Quinton Station.



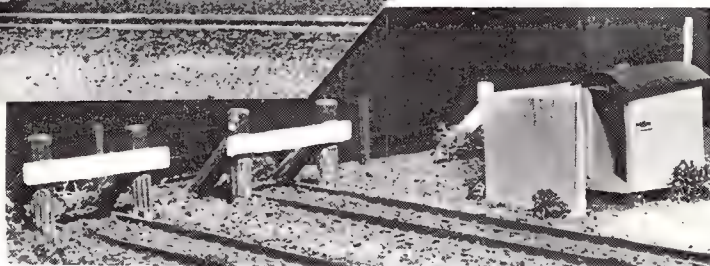
Fuel depot office at Quinton.



Quinton Station.



Loco foreman's office.

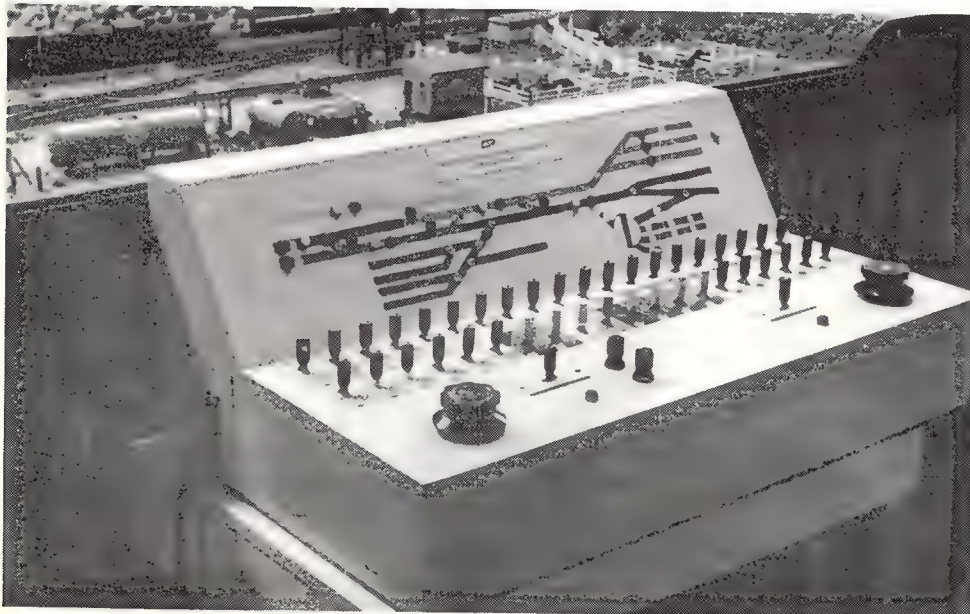


Quinton Station — the end of the line.



Freight facilities at Quinton goods yard.

Control panel.



WEATHERING BUILDINGS

I feel that the buildings a modeller uses on his layout can add or subtract a great deal from the realism he is trying to attain and so care should be taken in choosing what type of buildings to use. There are basically three types to choose from; the 'cheapie' plastic kits, eg Pola, Faller etc; the more expensive 'craftsman' type kits by Campbell, Timberline etc; and scratchbuilt buildings built from styrene, balsa etc.

I am working on a restricted budget and so I cannot afford the 'craftsman' kits even though I begin to drool at the thought of them. With today's economy I guess that applies to a lot of modellers. On the other hand I really enjoy building my own structures but this takes time and is beginning to cost more and more; ninety five cents for five plastic windows has really made me start thinking about building my own window frames.

Even so, I have tended to steer clear of plastic buildings because, to me, they look too toy like. However I am the impatient type who wants a bustling metropolis as soon as the last spike is down (if not before), and so I have really been faced with a problem.

This Christmas my nephews unintentionally provided me with an answer to this dilemma in the form of a Christmas present. Knowing what a nut I am about trains and not having much money to spend they went into a hobby shop and asked what they could buy for a dollar. The result I found, when I unwrapped the present, was a Pola two storey brick house, one of those dreaded plastic 'cheapies'.

I accepted it gracefully thinking that I could put it away when I got home and forget about it. Then I realised that the next time they came to visit they would want to see the building on the layout. It took me some time to try and think of an answer but finally I had one of those rare flashes of genius, such as Newton had when he discovered gravity. I could, without much effort, turn the 'plastic' looking house into a not so plastic looking residence.

Floquil produce a number of paints that have fascinated me for some time, they have such intriguing colours as Dust, Grime, Rust etc, and it was with the help of these that I was able to carry out the necessary transformation. One word of warning though, Floquil paints attack unprotected plastic surfaces and to overcome this Floquil produce a clear lacquer called Barrier which has to be applied first.

The first step was to apply the Barrier to the unassembled components. When this had dried I started the next step by painting a small portion of one wall with Grime. These colours are more of a wash than a paint and so they flow over the surface and between the bricks quite easily, they also dry quickly. Before the paint had a chance to dry, however, I gave the painted portion a light wipe with a tissue. This removes the excess paint and allows the original colour to show through. In this case it had changed a bright red to a dull red. I repeated this step until the whole house had been painted. It must be done in small portions or the paint dries so quickly that none can be wiped off.

When the Grime was dry I then gave the walls a coat of Dust. This coat doesn't require wiping as it leaves only a vague hint of colour when it dries. The end result is a plastic building that doesn't look so plastic and will blend in with scratchbuilt and 'craftsman' type buildings.

S. Livesey

The copy deadline for all
ADVERTISING COPY for the
January/February 1977 issue is the
15th December. Please BE EARLY.



Once again the camera of Jack Parker, is used to illustrate a few highlights of the Sydney Model Railway exhibition, held last October. The photograph above, shows AD6015 hauling a goods train on the "down" track, through Menengle. The below left photo was taken on the HO_n3 Timber Railway, exhibited by the Illawarra Model Railway club. The trees look real, for they are trees, well at least they are small branches of trees. The below right photo is of the N scale Swiss layout. This fine scenic model was exhibited by Mrs Taylor and son. Mrs Taylor was responsible for most of the scenery, and AMRM is pleased to note that an article on this layout will be published soon.

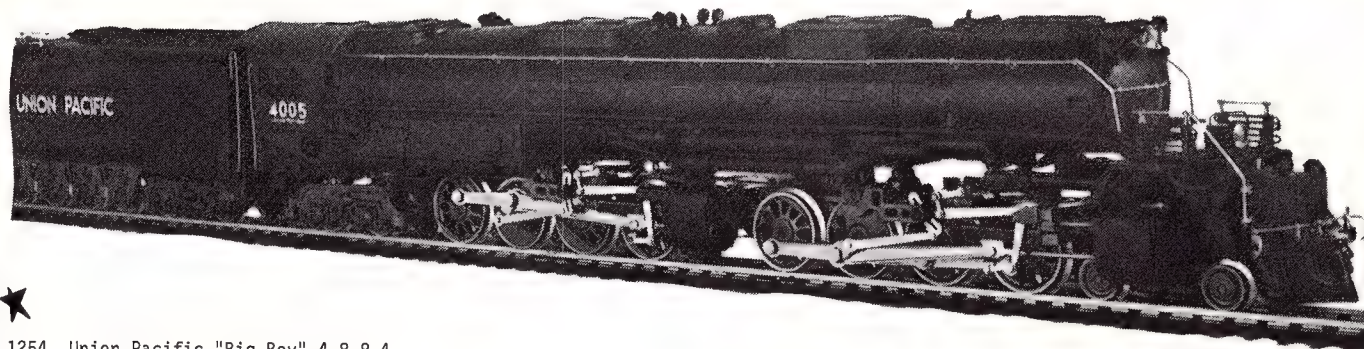
SCENIC ROUTE

Readers are requested to submit photographs for inclusion in this section of A.M.R.M. The photographs must be black and white, preferably glossy; must also include sufficient details so that a suitable caption can be printed. The photographs, preferably of models, should be sharp, and in focus. Polaroid pics are not suitable.

Send photographs, packed tightly between stiff cardboard to SCENIC ROUTE, S.C.R. Publications, P.O. Box 235, Matraville, 2036. Include instructions for cropping and return of photos, if required.



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brass bell etc., fitted with large
type ring magnet motor (as in 0
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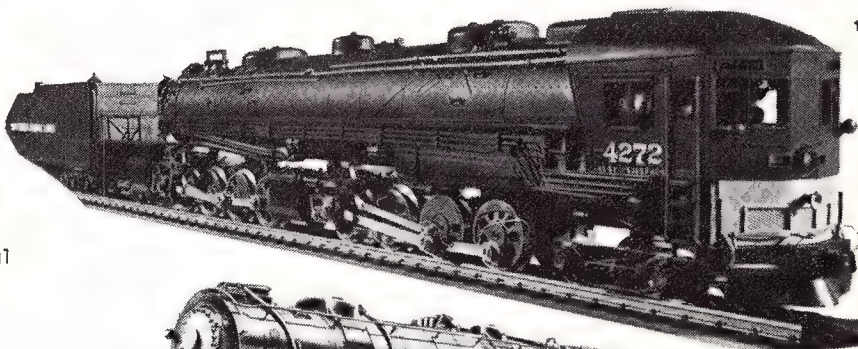
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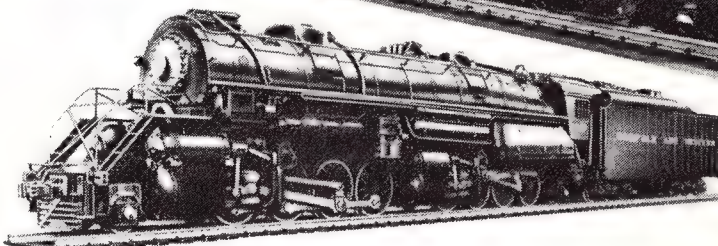
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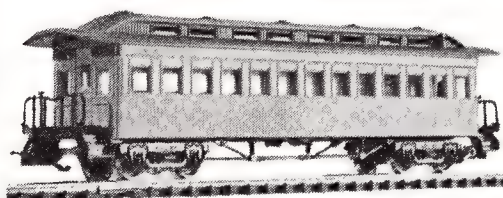
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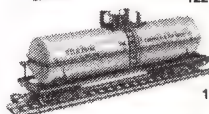
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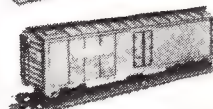
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TIMBER RAILWAYS.

Rail transportation was used for many industries in Australia, the timber industry of Western Australia being but one of them. However the W.A. timber industry used the W.A.G.R. 'G' class loco which featured in the Prototype Plan section in the January/February 1976 issue of A.M.R.M. Both photographs, made available by the Forests Department of Western Australia depict the 'G' class in action.

Many modellers have expressed interest in modelling a Timber Railway but need the necessary data to enable accuracy in the modelling project. We are publishing these photographs, hoping that some reader will write an article or two on this interesting industry.

Special thanks go to Ross Hurley for the photos.



REMOTORING A 44 CLASS

Being the son of a former South Australian Railways employee and having spent most of my pre-teen years in railway towns, Terowie, Cockburn, Port Pirie and Tailem Bend, to name a few, I have maintained an interest in railways and model railways all my life. Unfortunately, as a youngster, I was not lucky enough to have a layout.

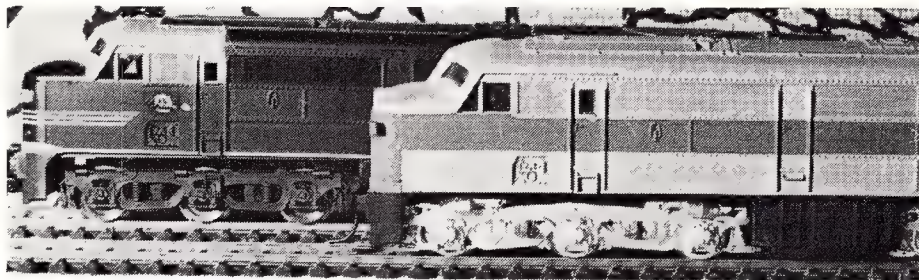
However since my apprenticeship and nearly eight years service with the Royal Australian Navy I have been able to accumulate a few items of equipment. Due to postings and the type of service accommodation, however, once again I am not able to have a layout. My equipment sits on a board 8'x18" with a few lengths of track attached, so I have developed into an experimental member of the model railway world.

Originally I had grandiose schemes to build a large layout (to be accommodated in the house) I was to build on leaving the RAN) using American made kits. After purchasing a few Australian pieces of equipment, namely a SAR 830 class/NSWGR 48 class from Berg's Hobbies, 9 Lima 44 class locos and a number of Indian Pacific coaches I decided to model Australian equipment, but to run my own railway system. With this in mind I proceeded to modify a Lima 44 class loco. The following is a rough description of how I went about it.

To assist in modifying this loco I purchased a couple of sheets of Plasticard in various thicknesses, 1 pair of Kadee 5 and 10 couplers and a Hobbytown of Boston motor kit (27608F-1: Alco 2000 hp flywheel drive power conversion kit). At this stage I did not realise I had chosen the wrong kit, for the bogies were incorrect, however I pressed on.

The unit was pulled apart with couplers, bogies, lights and motor being discarded.

A more durable loco was what Eric Bell needed. This is how he obtained it.



BODY

All windows, headlights, number lights and horns were removed to prevent damage. On the inside the weight locating stem and body locating stem were removed giving a complete obstruction free interior. The exterior paint was removed using cotton wool soaked in methylated spirits. This was quite messy, but it gives an even surface for any further painting. To enable the couplers to be fitted a hole had to be cut (area A in Diagram 1) measuring 8mm x 4mm. Area B was filled in with 0.060" Plasticard to complete the 'cowcatcher'. The edges were filed to give a smooth contour. The 'B' end of the loco requires extra modification, due to the shape of the body, but the principle is the same and with about the same dimensions. After these slight modifications it

was to the paint shop for what turned out to be a poor job. Since it was my first attempt it will suffice for the time being. Since painting, air horns and windows (some open and some closed) have been replaced.

UNDERFRAME

This is where the majority of the work had to be done since holes had to be cut and other areas filled in. Light locating lugs were filed flat along with the front bogie pivot shoulder. This pivot hole was filled and filed flush again. Motor locating lugs in the rear section were filed flush with body sides. A large section (shown shaded in Diagram 2 and Diagram 3) was cut out to enable bogies to be connected via universal joints. Diagram 3 shows the frame prior to fitting of motor, flywheel and bogies. Holes are drilled at: 1 — for couplers, 2 — for bogie pivots, 3 — for securing bearing mountings for flywheel and 4 — for mounting electric motor. (With motor mounted in this position enough room is available for detailing the driving cab interior). The holes were drilled with a 1/8" drill and filed, as required to suit the screws in the Hobbytown kit. Area A, measuring 24mm x 15mm, was cut so that raised portion of trailing bogie would not foul the body and to attach one lead of the motor to complete the circuit. Areas B and C are pieces of 0.060" Plasticard 30mm x 10mm and 30mm x 13mm respectively glued to the underside of the frame. Another piece 28mm x 10mm is glued on top of the piece at B. The difference in height between B and C is to correctly align the flywheel.

DRIVING ASSEMBLY

This was assembled with the help of the instructions contained in the Hobbytown kit.

ASSEMBLED UNIT

The couplers are attached after the body has been placed on the frame, since coupler screws actually hold the body in position. Once assembled some filing was required, due to incorrect bogies, on the fuel tank and end steps, so that the brake rods would swing clear.

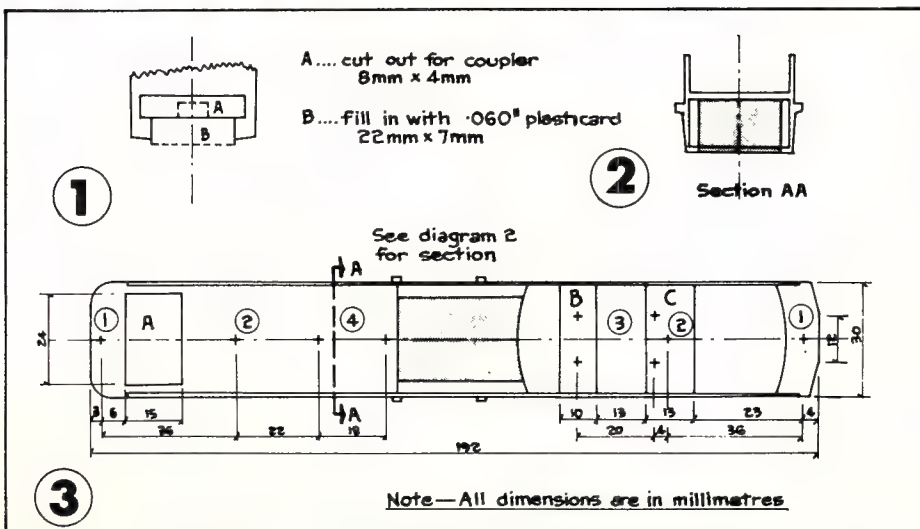
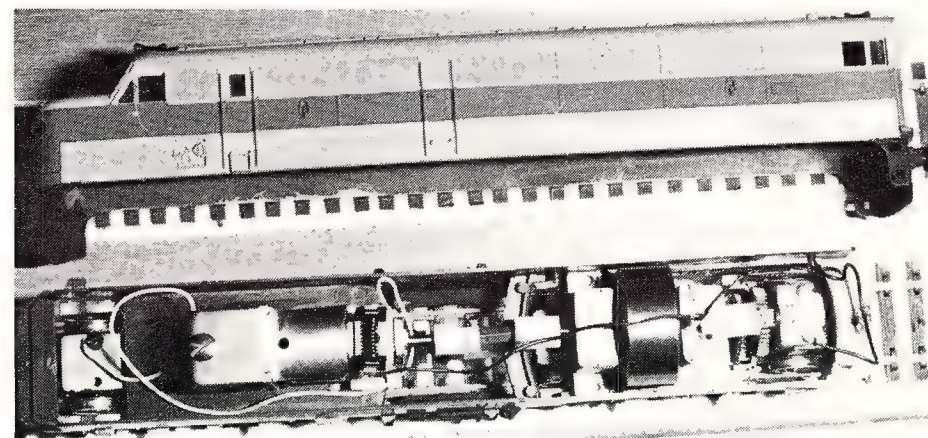
TESTING

This unit has not undergone a full set of tests, since I do not have a layout, but it was used on a private layout in Perth and it had no trouble hauling 16 freight cars over both flat and incline planes. I feel it could handle in excess of 20 vehicles with ease.

CONCLUSION

This exercise was started for two reasons: 1 — to see if a Hobbytown kit would fit, and 2 — to see what my capabilities were. I achieved both objectives and am very pleased with the end result. With more experience I know I could produce a better model.

continued on page 21



The necessity for a suitable method of holding parts of Australian made kits, in a square position while waiting for glue to dry led me to designing and making a jig.

I found this jig so successful that I feel other modellers may benefit from its use, so for the benefit of those interested here is how to make it.

First you will need these or similar materials. About 2ft of 3" x 1/2" finished size dressed pine, 5 3/4" x 10 countersunk head wood screws and 2 each 1 1/2" x 3/16" countersunk head Whitworth bolts, Whitworth wing nuts, and 2 3/16" flat washers.

Cut a 12" section of your wood and approximately 1 1/2" from one end squarely mark a line across the 3" face. (Accuracy here is essential.) Then mark another line 1/2" further on, then check out a portion 1/4" depth at those marks. (Remember this must be square.) This is to be the bed plate.

Now cut a section from your remaining wood, 1 1/4" x 3" and one piece 1 1/2" x 3", these will form the face plates for your fixed and sliding blocks, and one piece 2" x 3" for the base of the sliding block.

Next cut two braces, one for each end, 1 1/2" x 3/4", these dimensions are not critical, but at

GLUEING ASSEMBLY JIG

Col Walsh reveals a few of the details for making a glueing and assembly jig.

least one corner must be square.

Cut 2 pieces 1" x 3" from the little you have left, for legs once again these dimensions are not critical.

Now for the hard part. Drill 2 holes 3/16" in the base of the sliding block about 1/2" from either side and 1" from the ends. Countersink these holes.

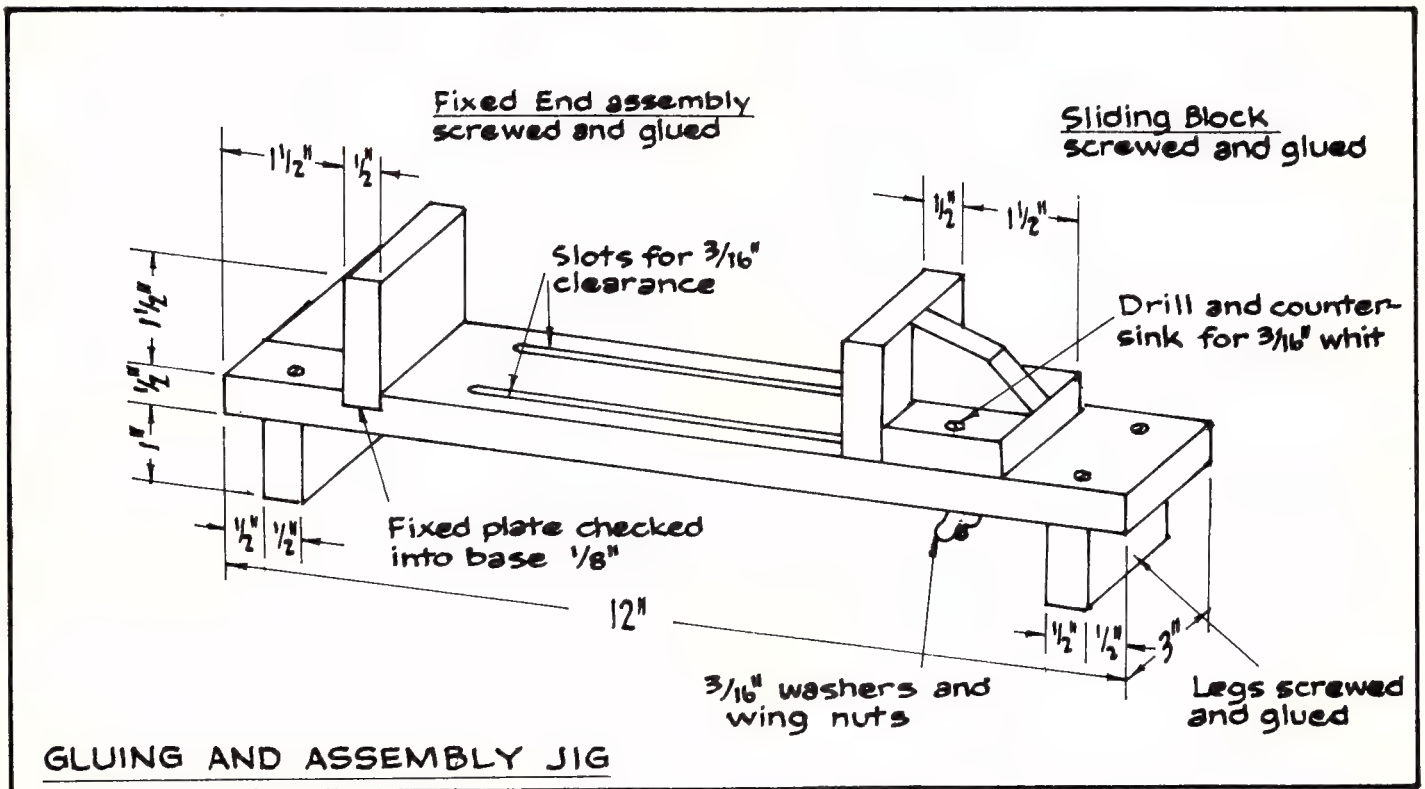
Take the bed plate and cut 3/16" clearance, slots to match the width apart of the holes you drilled in the sliding block base. This can be done by drilling a hole at either end of the proposed slot and using a fretsaw, or jewellers saw, cut from hole to hole. I did not make the slots continuous on my jig for reasons of strength.

From the top of the bedplate (you cut the 1/2" x 1/4" Checkout in the top, remember) drill

and countersink 2 holes in the centre about 1/2" from each end, turn the bedplate over and drill and countersink a hole 1 1/4" from the end into the centre of the checked position.

Drill and countersink one hole in each facing plate, and using your square, and copious amounts of patience, and a little bit of glue, assemble your bedplate assembly, and sliding block sub-assembly as illustrated in the diagram.

Allow the glue to dry, then place the 3/16" Whitworth bolts into the holes in sliding block assembly, place assembly on bedplate and with bolts in the slots move sliding block along bedplate slots to check freedom of movement, remove any impediments and when satisfied place washers and wingnuts on bolts below bedplate and your ready to go.



REMOTORING a 44

Continued from page 20.

Since being asked to write of my motorized 44 by Bob Gallagher, and writing about it, I have purchased quite a few back copies of AMRM and have had a tinge of home sickness, so I have commenced to model SAR equipment. Again using a Lima 44 I am part way through constructing a SAR 930 class loco using a Hobbytown kit, but this time with the correct bogies. I am also part way through constructing a SAR 8300 class brake van.

With these pieces of equipment accumulating one day I will be able to build my own layout.

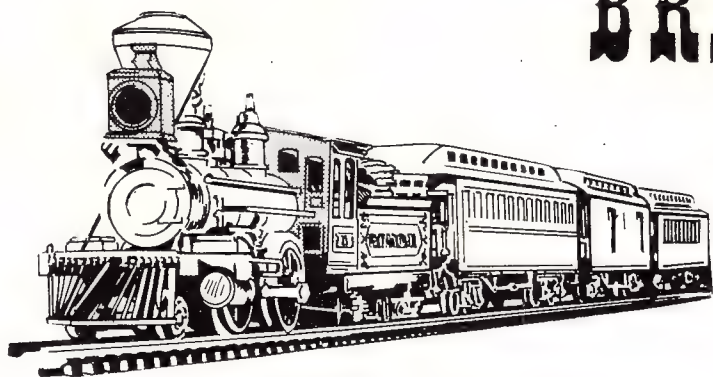
INTERESTED IN TRACKWORK

South Australia now has the dubious honour of having two triple gauge stations, they are Gladstone and Peterborough, both towns being situated in the mid north of that state on the Indian Pacific route from Sydney to Perth. Port Pirie has lost its title as a triple gauge station with the closure in 1970 of the 3' 6" line to Broken Hill.

The enclosed photo is for the benefit of any modeller who would like to model a triple gauge turnout, the prototype shown in the photo is situated at Gladstone. Numbering the rails 1 to 4 from left to right, the gauges are 1 & 3. 4' 8 1/2". 2 & 3. 3' 6" and 2 & 4. 5' 3". You will note that there is "only" six frogs in the one set of points.

Hugh Williams





BRANCH LINE

MODEL RAILWAYS

WE COULD FILL THIS PAGE

WITH LISTS OF BRAND NAMES — OF —
 LOCOS AND ROLLING STOCK ALL GAUGES
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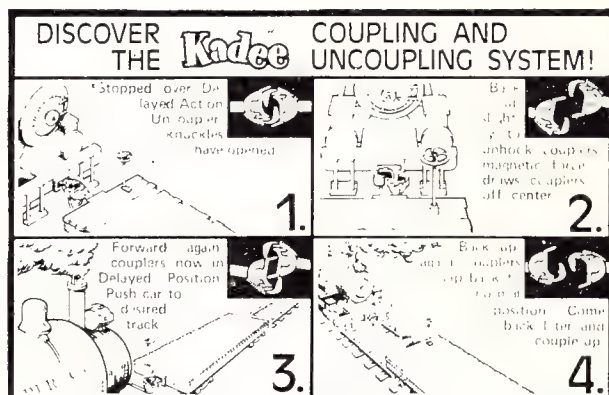
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AN AIRFIX ROUNDHOUSE

Who would have thought of converting this kit into a roundhouse?
Hugh Bennett obviously did.

That versatile Airfix engine shed kit has been made up into locomotive depots of many shapes and sizes, but so far I haven't seen descriptions of any in roundhouse form. I have seen photos of gable-fronted roundhouses in other countries, and we even have a small 3-stall example here in New Zealand, at Lyttelton, the port for Christchurch. On this one the pitch of each roof section spreads out to the greater width of each stall at the back of the shed. This is hardly possible with the Airfix kit of course, but a section of flat roof between each stall overcomes this problem. I found a 4-stall roundhouse just fitted neatly into the only available space when I enlarged my small depot. Eight Airfix kits were required, two joined end to end for each stall. I used the spare side wall sections to support the inside edges of the roofs by cutting out the wall areas round each pair of windows, leaving a frame about 1/4" wide to support the roof and end sections. Two side walls had to be left intact though, to provide the three intermediate wall sections at the rear of the shed. This meant scrap pieces of plastic had to be used to make up supports for two of the inside roof edges. The spaces in the four main rear sections covered by dummy "boxes" to allow for couplings of any extra-long locos. (I got a bit carried away when doing these "boxes", and had fitted one to an intermediate bay before I woke up and realized it wasn't needed there!)

The gables off spare front sections were used to reinforce the roofs where necessary, and supports were also needed midway along each roof edge, braced between each stall for greater strength. Plasticard was used for the flat roof sections, and lengths of plastic were cemented



Lyttelton, New Zealand, locomotive depot.



to the inside edges of the doorposts to strengthen them and improve the appearance. Pieces of old blank negatives make excellent glazing for the windows, giving that slightly dingy appearance so familiar with steam locomotive sheds. A darkish matt grey looks about right for the roof, and I painted the walls a semi-matt reddish-brown.

My layout is far from finished, and neither the roundhouse nor the older straight shed are attached to the baseboard yet, so I was able to

get a photo showing the rear of the roundhouse clearly by posing it temporarily over the turntable.

The locomotive visible at the right of the roundhouse in the rear view, and on the turntable in the general view, is my latest pride and joy, the Rivarossi N.Y.C. Hudson which I so sacrilegiously modified in the style of our N.Z.R. KA class. The nose of a partly-converted Triang 2-6-2T is poking out the nearer door of the straight shed, and four kit-bashed models

based on older N.Z.R. types are posing in the doors of the roundhouse. They are Baldwin-style 4-6-0 and 2-6-2 types, an old double Fairlie, and a Vanderbilt tender made from an Airfix tank wagon kit. Pausing at the tunnel mouth is a fairly old 2-10-2, waiting for the signal to let it into the yard. I have to admit none of the kit-bashed models are motorized; they just stand around the yard doing their best to make it look like a busy depot.

The following issues are available, subject to prior sale:-

- No. 1 - April/May 1963 (reprint)
- No. 48 - January/February 1971
- No. 49 - March/April 1971
- No. 50 - May/June 1971
- No. 51 - July/August 1971
- No. 53 - November/December 1971
- No. 54 - January/February 1972
- No. 55 - March/April 1972
- No. 56 - May/June 1972
- No. 57 - July/August 1972
- No. 58 - September/October 1972

- No. 59 - November/December 1972
- No. 62 - May/June 1973
- No. 64 - January/February 1974
- No. 65 - March/April 1974
- No. 67 - July/August 1974
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All the above are available at the price of 45c each (including post and packaging).

- No. 71 - March/April 1975
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PROTOTYPE PLAN

The FX-class 44-ton capacity bulk flour wagons were placed into service in late 1968. These wagons are equipped with pneumatic loading and discharge gear as well as roller bearing loading and discharge gear as well as roller bearing high speed bogies. They are suitable for bogie exchange.

Photographs by Peter Vincent.

Top of FX.

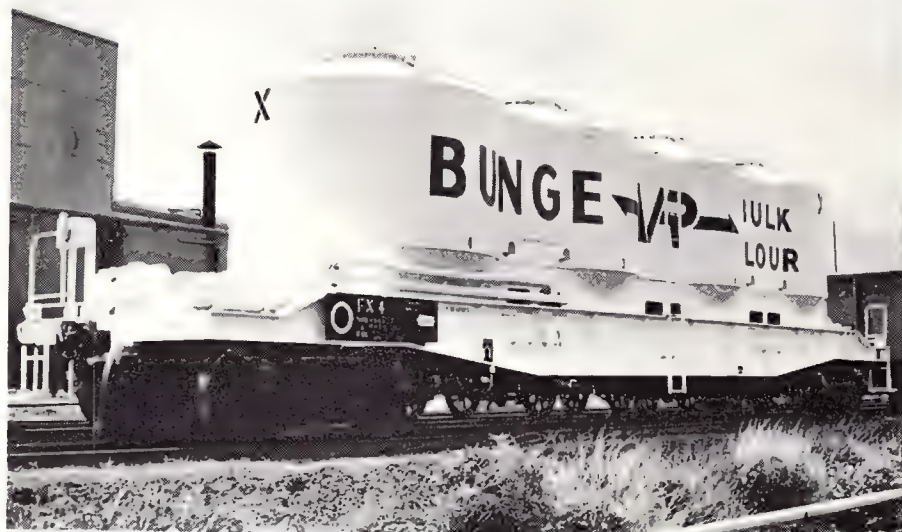


Victorian Railways 'FX' wagon

BULK FLOUR PNEUMATIC DISCHARGE



Photo by Graham Ahern.



HINT For removing excess solder

Quite often when soldering small parts on locos and such, excess solder flows onto the job. Removal of this is usually a tedious process, either with a craft knife or file. There is however a product which can do the job much more quickly and easily. It is called Solder Wick, and is made of braided wire, impregnated with a type of flux, the strip being about an 1/8 of an inch wide, and comes in a small roll. The cost is about \$2 per roll. It is available from George Brown and is primarily for radio/TV techs. When the braid is placed over the excess solder, and a soldering iron applied, the braid soaks up the solder leaving a clean surface.

John Sever

EXHIBITIONS

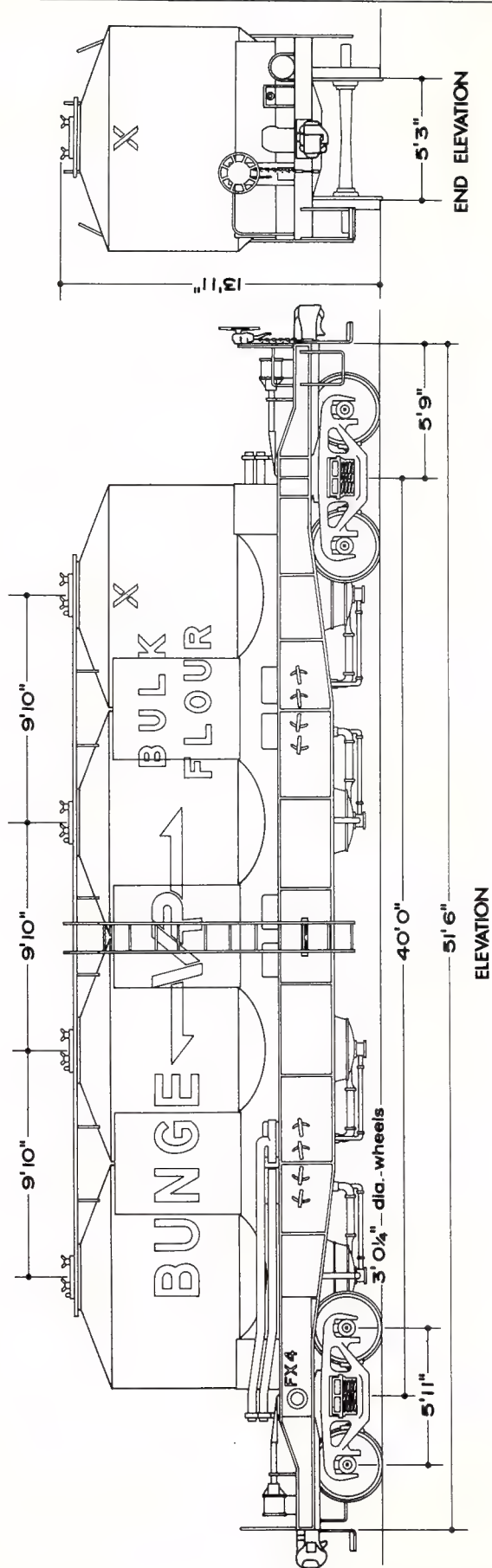
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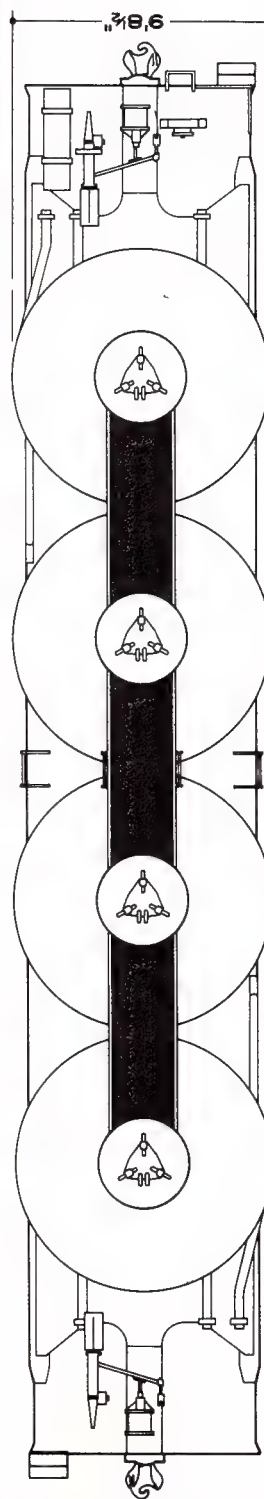
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VICTORIAN RAILWAYS

FX WAGON

Bulk Flour



PLAN

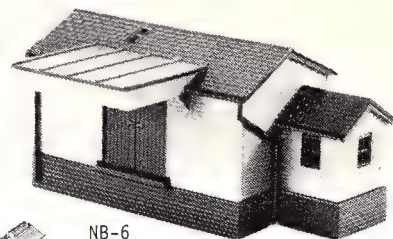


Drawn by Ian Stevens, May 1976.

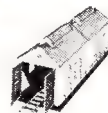
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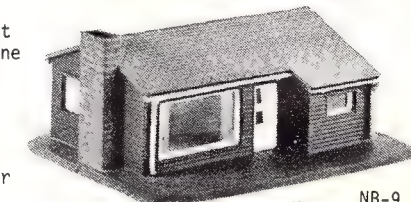
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NB-6



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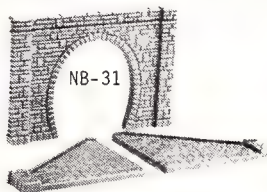
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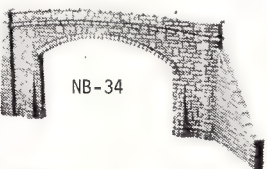
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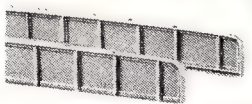
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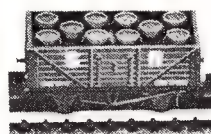


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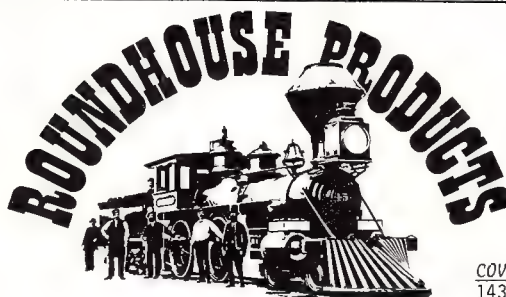
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PROTOTYPE PLAN

Q.R. 'T' wagon.

The Q.R. 'T' wagon is smaller than the Tasmanian Railways 'A' wagon. (AMRM. JAN/FEB 1975)

Officially described as a 4-wheel low-sided ballast wagon the 'T' wagon is of timber construction. Some have sides raised by addition of a third plank and some have been converted to ballast plough wagons.

The basic wagon has continuous brakes and lever hand brake while those converted to plough wagons have only train pipe and screw hand brake.

Running numbers range from 4 to 14644. In fact Nos. 57, 82 and 87 built by Ashbury in 1864 are still in use. At 30/6/74 there were 78 vehicles still in service.

Wagons vary in size. There were 13 different sizes in service in 1963.

Length over Buffers: 15' 4" to 17' 5"

Length over underframe: 12' 0" to 14' 0"

Width: 6' 2"

A typical Tare weight is 3t 5cwt, load 6t 15cwt.

There are two colour schemes: Black with white lettering and grey with black lettering.

The intending modeller would find these wagons an ideal starting point in the art of scratchbuilding using the methods outlined for Q.R. 'F' wagons in the July/August 1975 AMRM.

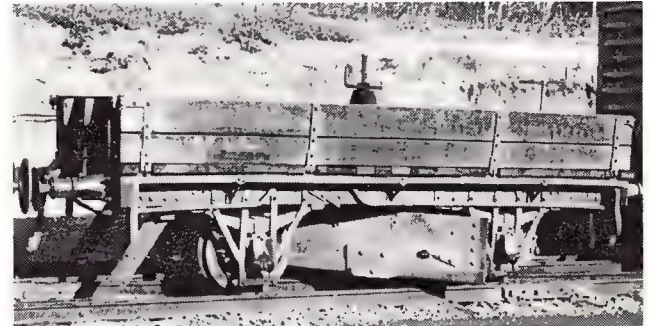
Researched and compiled by Peter Savage and Arthur Robinson.



T wagon at Grandchester, July 1965. Photo: R.L. Oeskins.



T14316 used for Departmental traffic. Grey body. Photo: A. Hayes.



T2907 in use as a plough wagon. Note screw handbrake. Photo: A. Hayes.

The copy deadline for all ADVERTISING COPY for the January/February 1977 issue is the 15th December. Please BE EARLY.

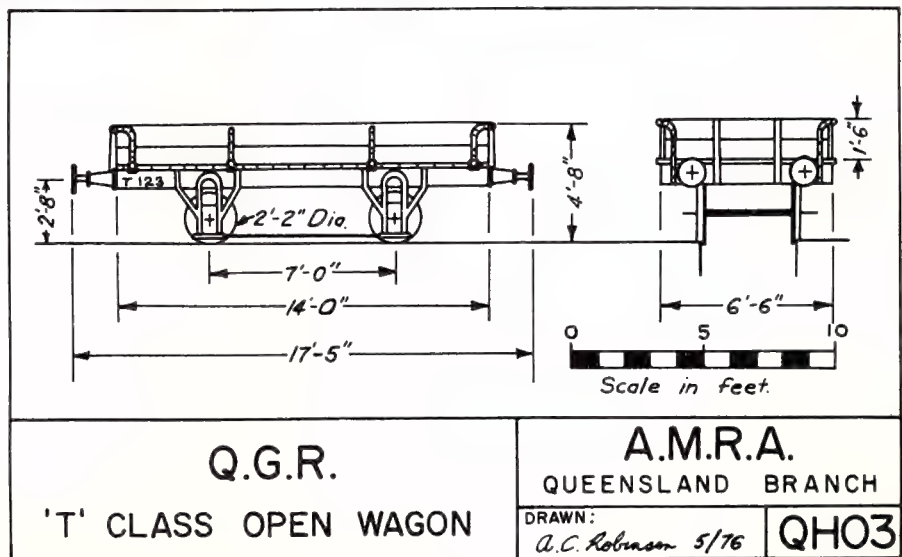
TRADE PRACTICES ACT 1974

The above act is now in force and contains strict regulations on advertising.

It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person, company or advertising agency submitting the advertisement for publication.

In case of doubt consult your lawyer.

S.C.R. PUBLICATIONS



There are probably a few AMRM readers who have recently built themselves flashing-light level crossings, and possibly added bells to the outfit. And no doubt some are sitting around like the cat that ate the cheese and waited for the mouse. Waiting with baited breath, that is. Waiting to find out how to make the level crossing fully automatic, just like the real ones.

First, let's sort out what you want for your level crossing. The factors vital to building up the circuit that you require for your crossing are:

- (1) Direction of trains through crossing e.g. left to right for all trains? right to left for all trains?
- (2) Single or multiple track
- (3) Power feed to trains — 2 rail? 3 rail? 3 rail equivalent? that is, using stud contact or overhead pickup.
- (4) Train voltage — 12V DC or perhaps 20V AC?
- (5) Is there current in the tracks that will annoy train detection circuits connected to the tracks? Examples include high-frequency current for lighting, currents from ASTRAC controllers, or sound system currents to loudspeakers in the trains.
- (6) Can you cope with electronic circuits?

A typical example of a combination of these factors would be a HO layout with a level crossing on a single track main line. Traction power is from 12V DC supplies, and 2-rail pickup is used. Perhaps there is a strong possibility of a sound system being connected to the tracks at some future date. (The owner of the layout can cope with the fixing of simple electrical faults, but that is all.)

A Simple Automated Crossing

Bearing the 'typical combination' in mind, let's work out how to organise the starting and stopping of the lights and bells at the right times. The trickiest part is achieving correct operation for trains in both directions. There is an easy way to get around this problem. It

AUTOMATIC LEVEL CROSSINGS

Featuring another in the series by Ian Weickhardt.

means cutting corners, but the effect is still quite convincing. Look at Diagram 1. This shows the scheme (not the circuit) of things for about the simplest automated crossing you could have, consistent with a realistic performance. Consider a train passing from left to right, and assume that as soon as the front of the train passes detector A, that 'detector' — whatever electrical or mechanical form it might take — causes the lights and bell to start. The motorists have fair warning, because the lights started before the train reached the crossing. Your 'average train length' might be a loco plus five bogie vehicles. This thought is based on looking at typical HO layouts in rooms about 12ft by 14ft, where the main line was not long enough to run long trains for long distances, and store them in long sidings. If, though, you have a very large layout and your train lengths vary widely from 'light engine' to a forty car freight drag, then you may not be satisfied with the simple system being described; in that case, read on, because we deal with a more prototypical approach a little later.

Back to our simple crossing. The lights have started, and our train moves towards and over the crossing. When the leading vehicle passes detector B, that detector turns off the lights and bell. By that time, the rear of the 'average length' train is clearing the crossing. The overall effect is certainly convincing when an average length train dashes through the section. Even a railmotor creates a realistic effect, providing it moves through at a reasonable speed.

Now let us look at the circuitry required. For this, I recommend that for \$3 you buy a copy of Kalmbach Publishing's *Practical*

Electronic Projects for Model Railroaders by Peter Thorne. I realise that some will not like this approach, but let me advance my reasons.

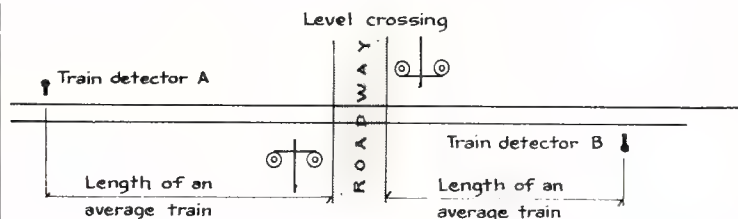
Firstly the greater majority of modellers are not conversant with electronic circuit technique or construction, and need the help of 'how-to-do-it' information. In the recommended book, the absolute novice at electricity will find much of the help he needs. It is pointless (and illegal) to reproduce Thorne's book in AMRM.

Secondly, the book is about 'cut-and-dried' circuits that have been built and tested using common components and reliable circuit techniques. Such a circuit is described on pages 44 and 45 in Thorne's book; the adaptation of the circuit for level crossing detection is Fig. 7 on page 58 of the same book. In this circuit, the 'train detectors' are the CdS (photo-electric) cells. Train detection is achieved by having a beam of light, focussed on the cell, interrupted by the train.

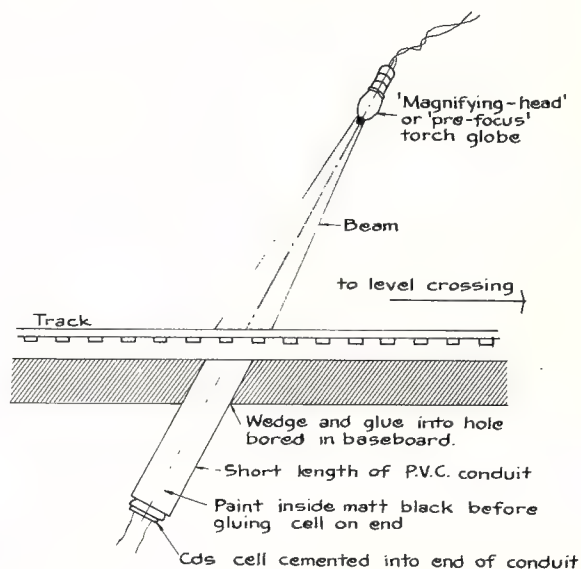
The advantage of this system is that it detects the very first vehicle, regardless of whether it is a loco or not, or whether it has metal wheels or not. It has no effect on any sound or lighting system connected to the track. It does require a lamp to shine on each CdS (cadmium disulphide) cell; I have found that relying on the interruption of room lighting over the cell does not provide reliable operation.

There must be a light pointed at the cell, as shown by Thorne on page 45 (Fig. 14). A further improvement in the reliability of the CdS cell operation can be achieved by mounting it at the end of a piece of plastic

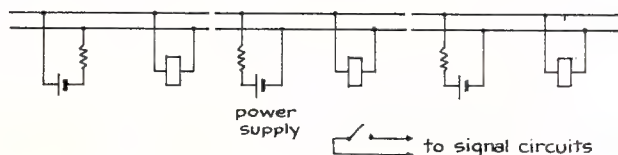
1 SIMPLE AUTOMATION ON A SINGLE LINE



2 MOUNTING A LIGHT DETECTOR FOR RELIABLE TRAIN DETECTION



3 PRINCIPLE OF PROTOTYPE TRACK CIRCUIT



conduit, as shown in Diag. 2.

If you do this, paint the inside of the conduit matt black to prevent reflections on it. You will probably find then that if you use a 'pre focus' torch glove (the one with the 'lens' formed in glass) to light the cell, you can have the globe up to two feet away and still have reliable operation.

This system of crossing control is one of the most reliable and effective. If you build up one of these systems, you will probably think up other automatic functions that can be controlled from light-sensitive circuits.

Controlling The Crossing From The Track

This is the way it is done by prototype railways. Its advantage to the modeller lies in the precision of timing. The basis for control is what is usually termed the 'track circuit'. Railway signal engineers talk of 'track circuiting' a length of track for the provision of automatic signalling. Such a project would include many track circuits, each one monitoring a section of track.

Usually, the 'track circuit' consists of a power supply connected at one end of the track section and a relay at the other end of the track circuit. The relay is normally held operated, which means that the circuit 'fails safe'. That is, if a rail breaks or the track circuit power fails, the relay releases, causing 'stop' indications on signals.

Normal operation for the entry of a train to the section is the 'shunting' of current from the relay through the wheels of the train, and the release of the relay. The power supply for a track circuit is determined by the location. In suburban electrified areas such as Sydney and Melbourne, the power is from low voltage AC supplies. On some non-electrified country lines, primary or secondary batteries are used. The standard gauge line from Melbourne to Albury uses audio-frequency currents supplies for the train detection circuits that start and stop the lights at level crossings.

So much for prototype systems. It is probably evident that for these circuits to work properly, there should be first-class contact between wheels and rails. We all know to our annoyance that this takes some doing on a model railway. It should also be evident that the 'track circuiting' illustrated in Diag. 3 cannot be used on a 2-rail layout.

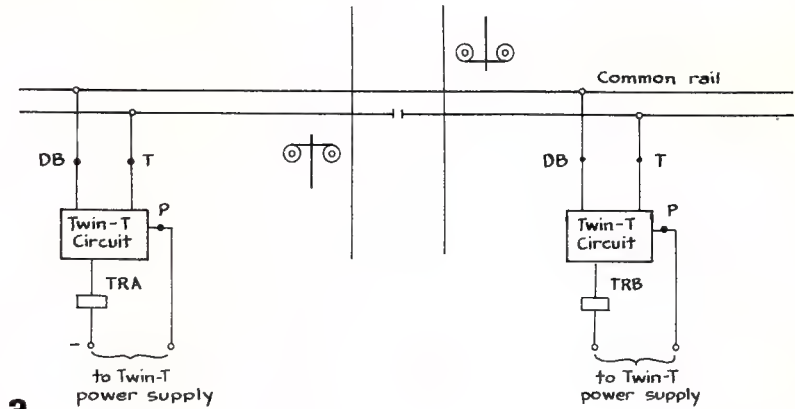
The relay would never release while the train was moving through the section, for the traction power would keep the relay operated. Even when such track circuiting is used on a 3-rail or stud contact layout, it can cause problems for the uninitiated in electrical engineering. For 2-railers, the answer to this problem is the well-proven 'Twin-T' system invented by Linn Westcott some 17 years ago. It is fully described in *Practical Electronic Projects for Model Railroaders*.

Let us see how to operate a level crossing from Twin-T circuits, that is, for two-rail layouts. Diag. 4 shows how to do it. Nobody says that the circuitry is simple. However, it certainly gives close-to-prototypical realism. Note that relay FSR is the function relay I mentioned in the July/August 1975 AMRM (page 10). FSR stands for Flasher Start Relay, and in Diag. 4 is operated from the Twin-T's instead of the switch shown in the July/August issue. If you examine the relay circuitry carefully, you'll see that relays DRA and DRB are the direction control relays, in that when one is operated by its 'track relay' (TRA or TRB) it 'locks out' the other DR. The train in clearing the crossing allows the first TR to release, but the operation of the second TR does not affect the stopping of the flashers and bells.

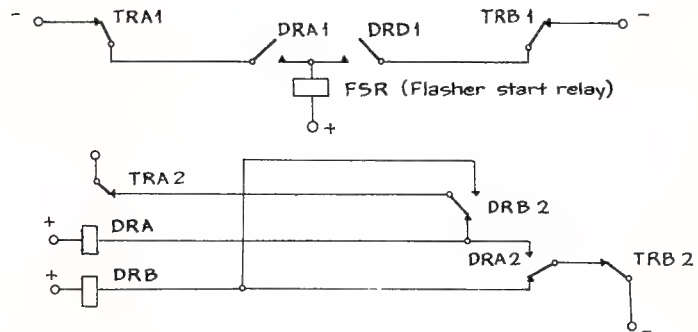
Now for some very important points:

- Note that TRA and TRB release when the train enters their respective sections, and operate when the train clears.

4 CONTROL OF A LEVEL CROSSING FROM THE TRACK

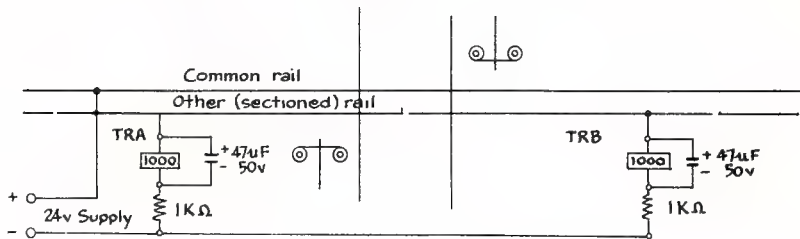


a

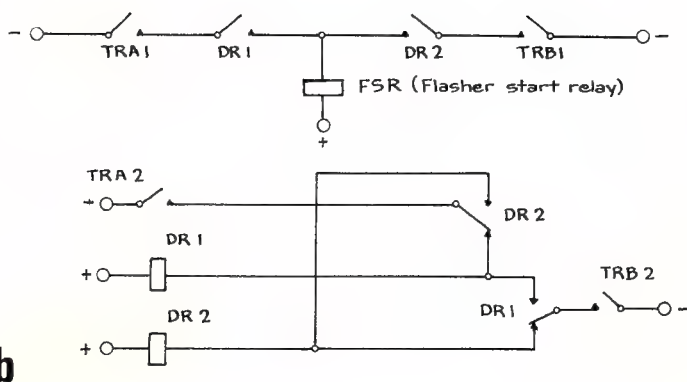


b

5 TRACK CIRCUITS FOR 3 RAIL, STUD CONTACT, OR OVERHEAD TRACTION LAYOUTS



a



b

- All wheel sets must allow current to flow from one rail to the other, so that the crossing lights do not stop until the last vehicle rolls through. Buy yourself some resistance paint.
- As the wheel to rail contact on the average layout is never perfect, it can be helpful to wire 50uf electrolytic capacitors across relays TRA and TRB. This slows down their operate and release, usually long enough to prevent irregular flashing and ringing.

Track Circuiting for 3-Railers

If, like me, you use stud contact and/or overhead power feed, your system is the electrical equivalent of 3-rail working. Normally, both running rails in 3-rail systems are bonded together for traction return current. Although this makes for good running, it is not

absolutely necessary. When we want to install track circuits, we disconnect any bonds between the rails along the required section, and then connect up the track circuit itself. Diag. 5a shows a reliable track circuit. It is a simple circuit, but there are some important points:

- The relay supply must be of a higher voltage than the traction supply in order to give reliable operation.
- The 'timing circuit' (1000 ohm resistor and 47uF capacitor) provide for chatter-free operation of the relay when the track is not too clean.
- All vehicles on the train must have metal wheels, or the level crossing will start or stop at the wrong times.

The track relays do not need to have 1000 ohm coils. You will probably find that anything

from 500 ohms to 1500 ohms will do. If you use higher relay voltages, you can use higher resistance relay coils. For safety's sake, do not use higher than 50V.

The rest of the level crossing circuit is similar in principle to Diag. 4b, but the track relays have 'make' contacts. Diag. 5b shows the appropriate circuitry.

Finally, a word to those readers who have not yet read the articles on the flashing light circuit or the bell circuit.

If you wish to build up an automatic level crossing, do it in stages. Build up the flashing lights and get them working first, and then build up the bell ringer and get it working.

Finally, build up the control circuitry described in this article, and bring it into service.

AMRM NEWS

This issue is the last of Volume 7 and it only seems a short while ago that the life of Australasian Model Railroad Magazine was threatened by lack of interest. It is nearly 3 years, or 18 issues, since we undertook to uplift the standard and regularity of A.M.R.M. to a point where it could compete on the open market. The work was not easy, for not one of the modellers who joined the staff had had any publishing experience. We had the help of Ray Wurlod and John Bevan but their time was limited by study for their respective occupations. We were very fortunate in gaining advice from Frank Shennan, of Shennan Publications, (Railway Transportation) and from Kevan Hardacre, who supplied the concept and original artwork for our present cover. We are grateful for the help these people offered.

Without saying, we at A.M.R.M. are proud of our effort, as limited as it was, in achieving our present standard. On our staff are a few who have been responsible for certain aspects of this improved standard and deserve special mention. Ian Thorpe and Graham Ball are two who head the field. Ian undertook to redraw or prepare all diagrams to a common standard, a mammoth task, while Graham has devoted many hours taking, developing and printing photographs for A.M.R.M. Without the help and enthusiasm of these two it would not have been possible to even get A.M.R.M. on the road to success.

Right behind the scene is John Casey and Ted Cole. John, the current S.C.M.R.A. President, has been the one responsible for the back issue and service section. Since he took over this job there has been few genuine complaints, which speaks for itself. Ted on the other hand, has had the mammoth task of keeping the records and labelling the envelopes for subscribers and S.C.M.R.A. members now totalling near 1,000, indicating that he alone addresses over 6,000 envelopes a year. (The extra envelopes being for the unkind subscriber, who omits to inform us of his change of address but still expects to receive his copy). Both John and Ted, in a 3 year period, have eliminated the old A.M.R.M. haphazard approach to customers. In latter months Trevor Moore has come to the fore, organising the packaging nights and some distribution, and thus relieving the management a little free time.

One of the biggest problems, in lifting quality and quantity has been the extra work generated, and this problem became so grave in 1975 that serious thought was being given to shut up shop, but Allan Brown came to the fore and not only took

over many of the labourious tasks, but took over leadership in areas that needed that extra 'boost'. It is easy to see, from the pages of A.M.R.M. where Allan, and some of the newer staff, started their contributions. Graham Ahern has also added many hours of time to A.M.R.M., especially chasing new products and organising the reviewing of products.

There are many others who deserve mention, most are now listed on our contents page, but space here precludes listing each one, but each, in his own way, has devoted time and effort to promote a hobby they enjoy, and each one must take some credit for the standard reached. For the record, A.M.R.M. now has a contact in each state, this being one of the reasons we have been able to cover most Australian railway systems.

Readers must surely be aware that all duties are performed by A.M.R.M. staff in their free time, without any remuneration or personal gain, apart from satisfaction of a job well done. To the help they, the staff have given, may I publically thank them, and I trust that all readers share my gratitude.

Hopefully we can continue A.M.R.M. for some time yet.

Bob Gallagher.

Piracy

From time to time we have made mention of pirating in the Australian hobby scene. This is a method by which a modeller or manufacturer uses a model of another manufacturer as a base to mold from. The frequent use of silastic rubber has made this unethical practice possible and more common and, unfortunately of late, it appears that there are models on sale in some shops that are obvious reproductions of a different brand.

It must be stated here that A.M.R.M. does not and will not condone the sale of PIRATED models, for it is not good for the longterm promotion of the hobby. Why? Well if Brand "A" releases a model of a vehicle (the preparation of which was expensive, due to master making), and Brand "B" copies a sample of the model and then retails it, the gullable public would buy the latter model as it would, and mostly is, cheaper (for Brand "B" does not have the high master cost). The final result is that Brand "A" goes out of business, due to poor sales figures, and Brand "B" goes out of business as there are no good models to copy. The end result is obvious.

Price Increase

Since the commencement of the upgrading of A.M.R.M. we have been successful in many areas. The general standard has definitely improved; the

number of pages has doubled; the circulation has doubled (6000 last issue) and now, next issue, our price will increase.

Since 1973 the cost of printing A.M.R.M. has increased by over 500%. Some of these costs were incurred by the improvement of the quality and the increase in size. The price has been offset by the increasing growth of our readers, however the time has come when the income for each issue lags behind the expenditure and there is only one way out, — increasing charges. The cost of each issue will be 70 cents, but, as a consolation, all other charges (including advertising) is to increase.

NOTE: If our cost spiral (500%) was applied to our 1973 price we would have to charge \$1.75. Fortunately this is not the case.

Volume 7 Index.

With the end of volume 7 we are delighted to advise readers that once again Kevin Ryan will be preparing Vol. 7 index, which should be ready for publication in late January 1977. A stamped, self addressed envelope will be required from any reader requiring the index (Foolscap size).

Readers Award.

Once again, maybe finally, we ask readers to write in to A.M.R.M. listing, in order, the three articles that has helped them most in 1976. Points are allocated and the author with the most votes will receive a cheque. We hope that a few more readers will take an interest in this award this year. Voting will close on 31.1.77.

Readers Survey.

To help A.M.R.M. staff keep in touch with the requirements of the readers, a survey is being conducted with this issue. The form is only being distributed to subscribers and members, but if any reader, especially newcomers to the hobby, have any specific request or idea for article subject, please feel free to write with the idea. The final results of the survey will be published.

Articles.

Some readers have, thankfully, written pointing out that we seem to be omitting articles that cover the newcomer, being the transgression from the toy trains to modelling. In defence we can only point out that we are purposely trying to avoid the duplication of subjects that are in book form and available in the hobby shops (The PECO, KALMBACK, CARSTENS and MAP publications cover the basic tracklaying, scenery, layout design etc) for with our limited time and space (and experience) we are unable to

improve upon the authors of the books.

We, however, would welcome articles, preferably of one to two pages, that cover the specific problems of the newcomer.

Exhibitions.

Our attention has been drawn to the fact that Canberra, the Capital of this country, now has a major exhibition, being supported by the model railway clubs of the A.C.T. There is now a major exhibition, in most of the mainland capital cities, which speaks well for the hobby.

The standard of the Canberra exhibition must have been high, for the layout by Phil Knife (OO scale, Southern Railway, pre 1940 era) won the award for best layout, and was exhibited at the Sydney 1976 exhibition, and took part in a very close three-way tussle for best layout. The "Menangle" layout beat the Southern Railway layout by one point which in turn beat the N.S.W. Modellers club by one point.

The Sydney judging was of interest for it used three judges, each of different interests, and used a points system that allocated points for different aspects of the layouts.

The system was organised by Ray Pilgrim from the suggestions put forward by Peter Betts in A.M.R.A. JOURNAL.; the points allocated being:

Landscape	10 points
Civil Engineering	10 points
Railway Structures	10 points
Animation — People	5 points
Animals	5 points
Locomotive and Rolling Stock	10 points
Trackwork	10 points
Operational Authenticity	10 points
Operational Intensity	10 points
Operational Reliability	10 points
Presentation and Originality	10 points

The use of more than one judge negates the possibility of the judge being tempted to be too biased. The Victorian Branch of A.M.R.A., who have pioneered the recent interest in Exhibition Awards, and should be congratulated, have a points system which we will gladly list for readers interest. The only obvious flaw with the system used at Sydney is the lack of any section to signalling and safeworking, being an important aspect of any railway, (although it must be noted that the N.S.W. Branch of A.M.R.A. are aware of the deficiency and are taking the necessary

action).

The awards for the Sydney exhibition went to; Most prototypical — MENANGLE exhibited by the Model Workshops group; Best commercial — FANTASTIC TOY and HOBBY SHOP; Most popular (by public vote) — MENANGLE: Victorian Branch A.M.R.A. award — N.S.W. Modellers Club. The surprise of the awards was that the reliable 'O' gauge was beaten for the most popular award, by one of the smaller scales. Of this, the exhibition organiser, Graham Larmour, who is once again to be congratulated for his effort, was quoted as saying "It goes to show that a prototype layout, properly presented and operated, can be an attraction to the general public." Another interesting comment, by a member of the viewing public, after being asked by the doormen what he thought of the exhibition, was 'There are too many Australian layouts'. Well, for the record there were three HO layouts, One O gauge layout and two commercial exhibitors directly connected with Australian models. The number is no larger than any other Sydney exhibition, but the overall standard is much higher than a few years ago.

Kits

Comments from readers have, again, brought to the fore the information, or lack of it given by manufacturers, on how to assemble their products. Admittedly, there is usually sufficient details included in each kit to get the kit together, but there is a lack of information on how to get the kit to look like the models in the manufacturers showcase. A.M.R.M. invites manufacturers and modellers to send in small articles that will help the public detail the kits correctly. (NOTE: This is not meant to take the place of the many deficient instruction sheets, but to supplement the knowledge of all A.M.R.M. readers).

Commercial News.

On show at the Sydney exhibition was the Prototype Z12 class and C30 class.

Workshop 5 Models continued a method of sale at the Sydney exhibition started many years ago by other brands, the method being that there was a special production run of a kit just for the exhibition. Workshop 5 Models produced the SFX and SBX passenger cars and there is no doubt that the continuation of this method of sale of "Exhibition Specials" will boost the number of modellers who attend exhibitions, for these kits were

good value.

It is interesting to note in the August issue of RAILWAY MODELLER that LIMA will be introducing a range of OO scale British outline equipment aimed for the U.K. market. Five locos should be delivered in September and a full system will be launched at the January shows.

The range will be in addition to the HO scale models currently manufactured by this company. Let's hope that this obvious compromise will eventually apply to the Australian outline modellers.

Mr. Brian Smith has purchased a controlling interest in ProTYPE Model Products, the new company is trading as Prototype Models (1976) Pty Ltd and will trade from Suite 604, 84 Pitt St., Sydney. 2000.

A.M.R.M. welcomes Brian Smith to the hobby, and no doubt we can all look forward to further detailed Prototype Kits. A.M.R.M. joins with its readers in acknowledging the contribution by Mr. Kevan Hardacre, the previous owner of Prototype, toward the Australian Model Railway hobby. In some areas, with Kevan's guidance, Prototype lead the field, to the point where Prototype is now a name for a quality product. Kevan's efforts will be with us for some time yet.

We have had the opportunity to inspect the Z25 kit (NSWR) from F.S.M., and both the assembled kit and the kit of parts is certainly encouraging. The detail is quite good and chassis concept quite original, in Australia. We will cover the loco kit more extensively in the review, which will be published as soon as possible, for readers benefits.

This issue we are pleased to advise that we have news of another two additional Australian prototype producers. Next year we should see products from Central Models, being N.S.W. outline (initially) and mostly goods vehicles, but a production run of the 422 diesel (fully powered) is promised. Included in the goods vehicles should be MB, KF, CHG, TRC, GHG and K wagon, being made from reinforced epoxy. We will advise further development as it comes to hand.

The second firm Australian Transport Models, will also produce N.S.W.G.R. outline kits and promise MB/MRC/MBC, BCH/FCH/HCH, BD, LLV/GLV/TLV, EMX BWH/FWH among others. We have a few samples to hand and they will be extensively covered in next issue, but the units have sharp detail, are moulded in the correct colour scheme and are reasonable priced.

BOOKS

Reviewed by John Bevan

I'm back. My place last issue was filled by a revived but revised article by Bob Gallagher on sources of information for N.S.W. Railway modellers. This issue I'm not going to look at a particular book but point out to modellers some sources of information about their prototype.

I feel that the average modeller will make the mistake of confining his researches to the obvious sources. By this I mean that he will, when trying to research a topic, look at books with railway orientated subjects. The modeller who is after some degree of model authenticity will have to broaden his search. Let's say that you are modelling the N.S.W.R. in the 1920's. If the modeller looks for many books on this period he will be very disappointed. Railway

books usually concentrate on a narrow topic of railways examined over a period. An example might be a book which deals with the history of a particular class of locomotive or line. Rarely is a complete view of the whole of railway operation given. I do not criticise the authors and publishers of these books for this shortcoming as they are meeting the normal desires of their readers. The modeller will have to turn to new sources.

The best place to start is the State Library. These usually have a large collection of books on the history of their state. The evidence of railways in these books may not be large but they will give to you the background information necessary for accurate modelling. For example, a photograph in such a book showing the departure of Mrs Smith and family for the city in 1910 may give you the type of carriages and locomotives used, the composition of trains in that period and the normal appearance of stations at that time. Remember, that despite the conservative attitude of railway administrations, things are likely to have changed since 1910.

If the modeller is modelling a particular location, a visit to that area's local historical society and local council may help. Here often exists old photographs which have never been published, which will aid the modeller. The local council will often have old building plans which will help the modeller to recreate the scene. It is difficult for us to imagine now just what the main street to a small country town looked like at the turn of the century.

More general sources will also help the modeller. Text books on engineering and architecture will show the modeller how buildings and bridges were built in a certain period and will make his structures accurate. It is disappointing to see a fine period model locomotive running over a bridge of recent style.

I realise that this little article has concentrated on historical modelling. There are two reasons for this: first the practise of historical modelling is increasing and deserves to be encouraged and, secondly, these general ideas apply to any modeller in search of accuracy.

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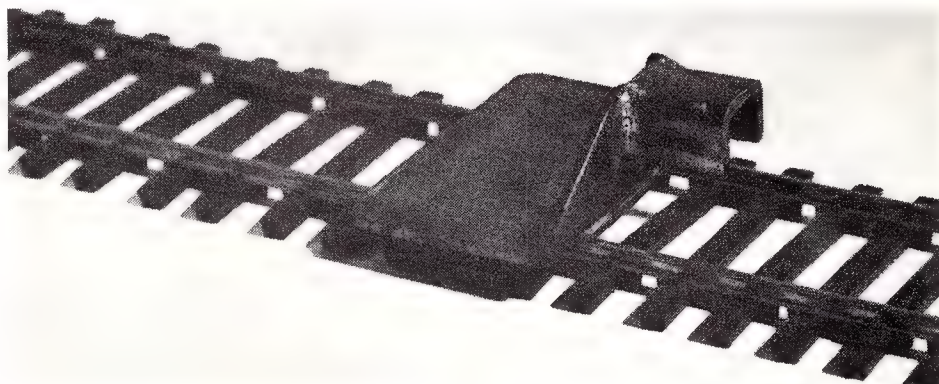
The photograph shows a simple jig I have made to enable me to quickly and accurately mark out the correct height and position of the coupler pocket on new rolling stock. When building new rolling stock, one of the last things to be considered is the mounting of the couplers. The usual procedure is to mount the coupler and then adjust the height of it by inserting packing under the pocket (if it is too high) or on top of the bolster if it is too low. The latter remedy has the effect of raising the vehicle body and if excessive packing is required, the resultant model tends to look more like a caricature than the scale representation you have tried to achieve.

The correct mounting of the coupler is of course essential for consistent, trouble-free operation and it follows that if the mounting pocket is in the correct position, then the coupler, when mounted, will also be correct. With this jig I find it a simple matter to run the vehicle up to it so the buffer beam is touching. A pencil (or scriber) is then run around the big thus marking height and position on the buffer beam. The required amount of material is removed (or added) as required and the vehicle is then ready to receive the coupler. I might add at this point that I carry out these operations before the vehicle is painted thus avoiding damage to the finished surfaces.

The jig shown in the photograph was made by cutting and folding one piece of brass to form the base, frame and projection. However, the drawing shows a modification which I feel will be easier to make, set up, and be easier to use. The projection can be made from a solid piece of metal and attached to the frame by means of a screw. It could also be soldered in position thus eliminating the drilling and tapping operations. However I would favour screw mounting as this allows some adjustment after the jig is complete and is being set up.

The frame is made from a piece of heavy gauge material cut to shape and folded. The

COUPLER POCKET MARKING GAUGE



heavier the material the better as this eliminates the possibility of the jig flexing in use. Although, the jig is so small there is not much chance of this unless the material is thinner than say 26 gauge. Be sure the fold is at right angles and is not weakened by stress cracks caused by too sharp a radius on the inside of the bend. When marking out, it is a good idea to heavily scribe the centre line on both sides of the frame. This makes subsequent location of the various parts that much easier.

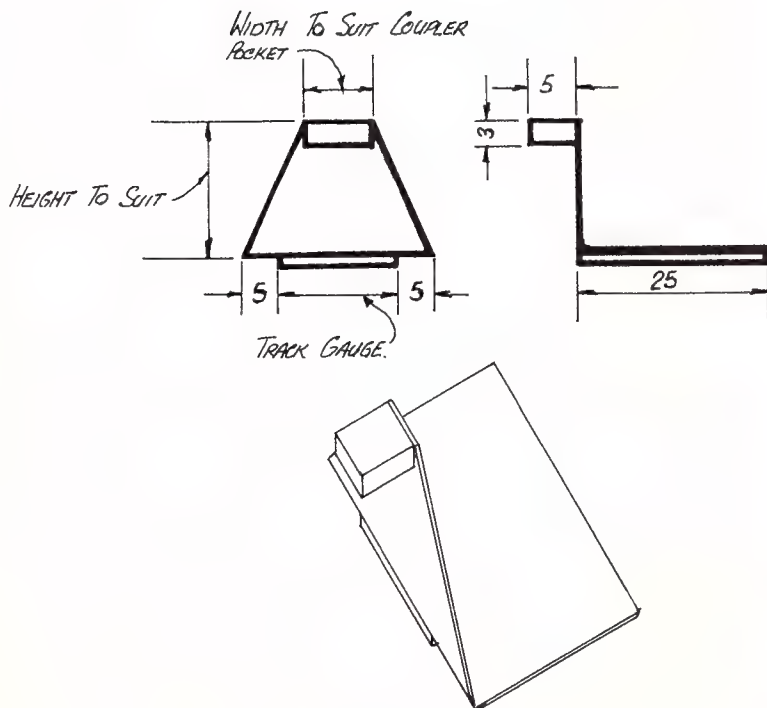
The jig location piece is simply a rectangle of material filed to fit snugly between the rails and soldered to the base of the frame. When soldering (actually sweating) the piece in position, I first of all tinned both surfaces. The pieces were clamped together with their centre lines aligned using a spring clamp such as a large office bulldog clip. Heat was then applied until

the solder flowed, and the joint made. The projection can then be mounted. If you are soldering it in position, you will have to be careful that heat transfer doesn't take place and melt the joint holding the location piece.

This can be avoided by holding the jig in a vice and let the vice act as a heat sink. Or, as a second, although less satisfactory alternative, the jig could be wrapped in cotton wool that has been soaked in water. With all soldered construction, the only means of final adjustment for height of the projection is by bending the frame so the edge of the projection is the correct dimension from the rail tops. To adjust a screw assembled version it would simply be a matter of moving the projection to the correct position and tightening the screw. Of course once set the jig should last a lifetime of scratch building.

I have come to rely on my jig as a valuable aid to consistent setting of couplers. I must admit I have developed the philosophy that if I can't be completely accurate, I can at least be consistent.

Dick Grace



The copy deadline for all ADVERTISING COPY for the January/February, 1977 issue is the 15th December. Please BE EARLY.

INQUIRY CORNER

Mr. W.S. Foster, of 6 Parrfield Rd., Roe Green, Worsley, Manchester, U.K. M28.4RR is researching the AD60 with a view to building it and requires a photo of the right hand side plus some information on cab fittings and arrangement. Maybe one of A.M.R.M.'s readers can help?

CONVENTION

A model railway convention is to be held in Waitemata, New Zealand, during March 1978. For further details write to P.T. Hobbs, Waitemata Convention, P.O. Box 3011, Auckland 1, New Zealand.

CLUBS

CANBERRA — A.C.T. The Canberra Model Railway Club is seeking new members to join their ranks. Amongst other projects, the club is at present building an exhibition layout based on Bargo, N.S.W. Contact the secretary, J.R. Mitchell, 84 Hurley St., Mawson, A.C.T.



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REVIEWS

AUTO PULSE (AP-7000) ELECTRONIC CONTROLLER. Sample supplied by manufacturer, Tempest Electronics, 33 Borg St., Scoresby, Vic. 3179. Price: \$39.95 (plus postage).

The model railway hobby has always benefited from the advancement of the industrial world. Tinsplate has given way to moulded styrene, handlaid track has given way to set-track and flexi-track, clockwork has given way to batteries, etc., etc. It was only natural that the electronic age would have some bearing on model railways. We have seen many applications of this facet, and the subject under review is one of them.

The Auto Pulse 7000 is an automatic throttle. As supplied it comes as a 130mm x 90mm plate that requires mounting into the control panel. (Full details are included in the instruction sheet, including a mounting template). A separate 12-16 volt DC power source is required.

Connection of the unit is via two sets of two leads, which stop any misdirected soldering irons from damaging the components on the printed circuit board. The instruction sheet indicates the correct connecting procedure, and we emphasise that the connection of the 12-16 volts DC must be in correct polarity, or the unit can be seriously damaged.

The control has two main functions that are selected by the inertia switch. One position gives control only by the throttle, similar to a rheostat, except that the train movement and control is very smooth. Low speed is fine and without any jerking movements.

Moving the inertia switch to the "I" position the controller takes a completely different attitude to the train and the reviewer had to take time to learn to use the controller, for it differed greatly from a standard rheostat. The layout of the controller shows a direction switch (which is elementary in use and principle), a red light which indicates a short circuit, the inertia switch, a throttle knob and a brake knob. The latter is probably wrongly worded for it really controls the train under automatic conditions and the braking is just one aspect of its use.

To utilise the automatic throttle the brake knob is in the "R" (run) position and the throttle set between two thirds to full throttle, direction is then selected and the power switched on. After a short delay the locomotive will commence to move from very, very slow to gradually increase to the full throttle setting. At any required speed the train can be stopped slowly, by selecting the "S" (stop) position on the brake. Selection of "QS" (quick stop) will stop the train within 12-15" while selection of "E" (emergency) will stop the train within 1"-2". The natural stop ("S") brings the train to a gradual realistic controlled stop. The "C" (coast) position allows the train to coast, at any pre-determined speed, gradually reducing to a stop.

After testing for one hour with Athearn, Life Like, Triang and scale brass models, all of which performed beautifully, the reviewer gained confidence to utilise the unit as a controller with realistic, and acceptable results.

The throttle was set on 'full' and the train set into motion by selecting the 'run' position. As soon as the train had reached any pre-required speed, the 'coast' position was selected. If the train slowed down too much, the 'run' position was selected until the speed was correct again, whence 'coast' was selected. On approaching the station the speed of the train was checked by momentarily switching to 'stop' and then back to 'coast'. Final stopping was caused by switching to 'stop' then to 'quick stop'. Of course, if the driver's judgement was out, 'emergency' was available.

The main, if only, complaint was with the starting of the locomotives. If the throttle had only a slow speed selected, the loco could take up to two minutes to start, causing a natural nudge from a finger. Setting the throttle on a high speed stopped this.

The AP-7000 lived up to its makers' specifications and is an attractive product. It will bring realistic operation to the model railway layout. Rated at one amp the unit will run most HO, the presumably N scale models.

It is pleasing to see a product of this quality being made by an Australian manufacturer. The well-detailed instruction sheet is ample for even the raw beginner. The price seems high but by comparison with the throttles from overseas is quite competitive.

Bob Gallagher

THE 1976 SYDNEY MODEL RAILWAY EXHIBITION

The annual exhibition organised by the NSW Branch of the Australian Model Railway Association was once again held at the Sydney Lower Town Hall over the Labour Day weekend in October and followed the usual format which is so popular with the model train watching public. 30 displays were presented and these fell into three groups, as follows.

1. The preservation related stands of the NSW Rail Transport Museum, Australian Railway Historical Society, Zig-Zag Co-op and South Steyne Steamship Preservation Society were well stocked with photographs, plans, books, etc. full of information on the prototype.
2. The commercial stands were made up of the local hobby and toyshops which, with the exception of Workshop 5 Models, were a little disappointing in as much as I had money burning a hole in my pocket and little to spend it on. Nevertheless the average modeller was well catered for by the many goodies on sale at these stands. The award for "Best Commercial Exhibit" went to John DeHorne's Fantastic Toy and Model Shop.
3. The operating (and static) layouts of railway and related equipment represented a wide range of prototypes and gauges, with the minority gauges well represented.

Norm Read and Col Shepherd's bit "0" gauge layout continued to entertain but for the first time I can remember failed to take out the "Most Popular Layout" Award. Trevor James displayed an L.G.B. gauge 1 layout complete with sound effects, whilst "N" gauge was represented by no less than four layouts

including Mrs. L.A. Taylor and son's fine Swiss alpine layout which was of the "guess where it will appear next" variety and elicited many favourable comments from fellow modellers and patrons alike.

English prototype in "00" scale was ably represented (I think — never having been to England) by the Southern Railway Modellers group and this layout was involved in a tussle with Model Workshop's Menangle layout for the best prototypical layout award, with the latter taking the trophy for the second year in a row, by one point!

Illawarra Model Railway Club displayed a H0n3 Australian timber tramway layout that I thought was a gem, showing what can be achieved in a small space and following local prototype in this gauge. Scenery, structures and rolling stock combined well to give a most realistic appearance and I, for one, was disappointed not to see this layout higher up amongst the awards. Another plus was the use of a large number of photographs of prototype timber tramways to create an atmosphere for this display.

Passenger tramways were represented by the Model Traction Association (1/32") scale and the Commonwealth Model Tramway group (3/4") scale.

Finally "H0" was out in force as usual with six layouts on display. These included Model Workshop's 'Menangle' layout (now expanded from last years effort) with one of the finest examples of prototype bridge modelling I have seen on any layout. The overall presentation of this layout, including its own floodlighting

system, authentic rollingstock, automatic signalling and fanatical attention to detail has set the standard for exhibition layouts and made it one of the best these past two exhibitions. Also modelling NSW prototype was Kevin Brown's Western Division Blue Mountains layout. This display was also very well presented with its own lighting and stand, giving a closed-in effect. The cuttings on this layout were a fine example of the modeller's art. The NSW Model Railway Club with their working coal loader completed a trio of fine H0 NSW prototype layouts which, together with the H0n3 timber tramway, made this one of the best exhibitions yet for local prototype. I hope this is a continuing trend. Several other layouts based on proprietary foreign outline equipment were of interest and completed the display.

Missing this year were the activities type stands featuring scratchbuilding, scenery, tracklaying, etc. of the type previously presented by John Dunn, Peter Betts, etc. which I feel is essential if we are to encourage the serious modeller in the hobby. I'll expand more on this later when I've put my thoughts on this subject in order — (Editor permitting, of course).

To sum up then, another successful, well attended exhibition. An overall continuing improvement in standards and presentation of displays coupled with increasing modelling of local prototype. Congratulations once again to Exhibition Organiser Graham Larmour for organising a smoothly run exhibition.

Ron Cunningham.

MODELLING IN THE METRIC MUDDLE

For those of us who build from available plans the conversion to metric measurement has produced a few problems. Back in the 'good old days' when we had the same measure of distance as the USA many local modellers bought the steel model railroad ruler which was made in the USA. This ruler had the prototype feet already converted into a variety of scales and clearly engraved. If you wanted to model a particular wagon you bought yourself a tape measure and found the dimensions of the wagon or else bought a plan from the Railway and calculated all unknown dimensions (panel widths etc.) from the scale that the plan had been drawn in making allowances for shrinkage of the paper. When you had found that a part was 9'6" long you merely cut your material to the 9'6" mark on the ruler and, 'hey presto', it's now to scale length.

The metric changeover adds a few more steps because several railway systems are now printing their plans with millimetres replacing feet and inches. The modeller now has to either use a conversion chart to convert millimetres to feet so that he can still use his ruler or else he has to buy a calculator, and divide the plan millimetres by his scale (87 for HO) and then do all his measurements in ACTUAL millimetres.

It appears certain from AMRM's enquiries that in a few years the plans of most wagons currently in service will have been modified so that millimetres replace feet for each dimension (the plan may still be in 1/4" scale however) or else the plans will have been redrawn to a metric scale which can mean a reduction in size and clarity. It is unlikely that the railways

will modify the plans of obsolete or withdrawn stock so modellers will be working with plans dimensioned in feet or millimetres. This means that a modeller of older stock will need to keep his steel scale ruler handy and would be advised to collect as many plans now as he can afford. While we wait for a metric scale ruler to be produced we may see articles for scratch-building beginners include a list of requirements such as '... knife, glue and an eight digit calculator with memory for calculations when working from old plans'.

Armchair modellers and those who operate equipment straight off the shop shelves may not be able to appreciate this metric muddle which possibly explains the calls for AMRM to go metric in everything it prints. If AMRM prints its plans in millimetres the model builder will either have to get used to using a calculator (or conversion chart) or else trust to luck that the plate maker and paper shrinkage have not combined to make the printed plan out of scale. If we ask for plans to always be drawn in feet and inches then the draughtsmen will have to convert the dimensions for all new rollingstock.

So what is the answer for the magazine. Because many of us will still need a steel ruler I believe that the readers can leave the decision to the draughtsman to draw in the scale he finds convenient with a recommendation that the length, width and height of major components be shown in both millimetres and feet. It may also be of some value if a fixed datum line is included on the plan with its length when drawn being shown. This could then be used as a guide as to how close to scale the plan is

when printed. The rail level could be used for this datum line.

As one of the Adelaide radio stations says, 'It makes you think, doesn't it.'

Phil Curnow

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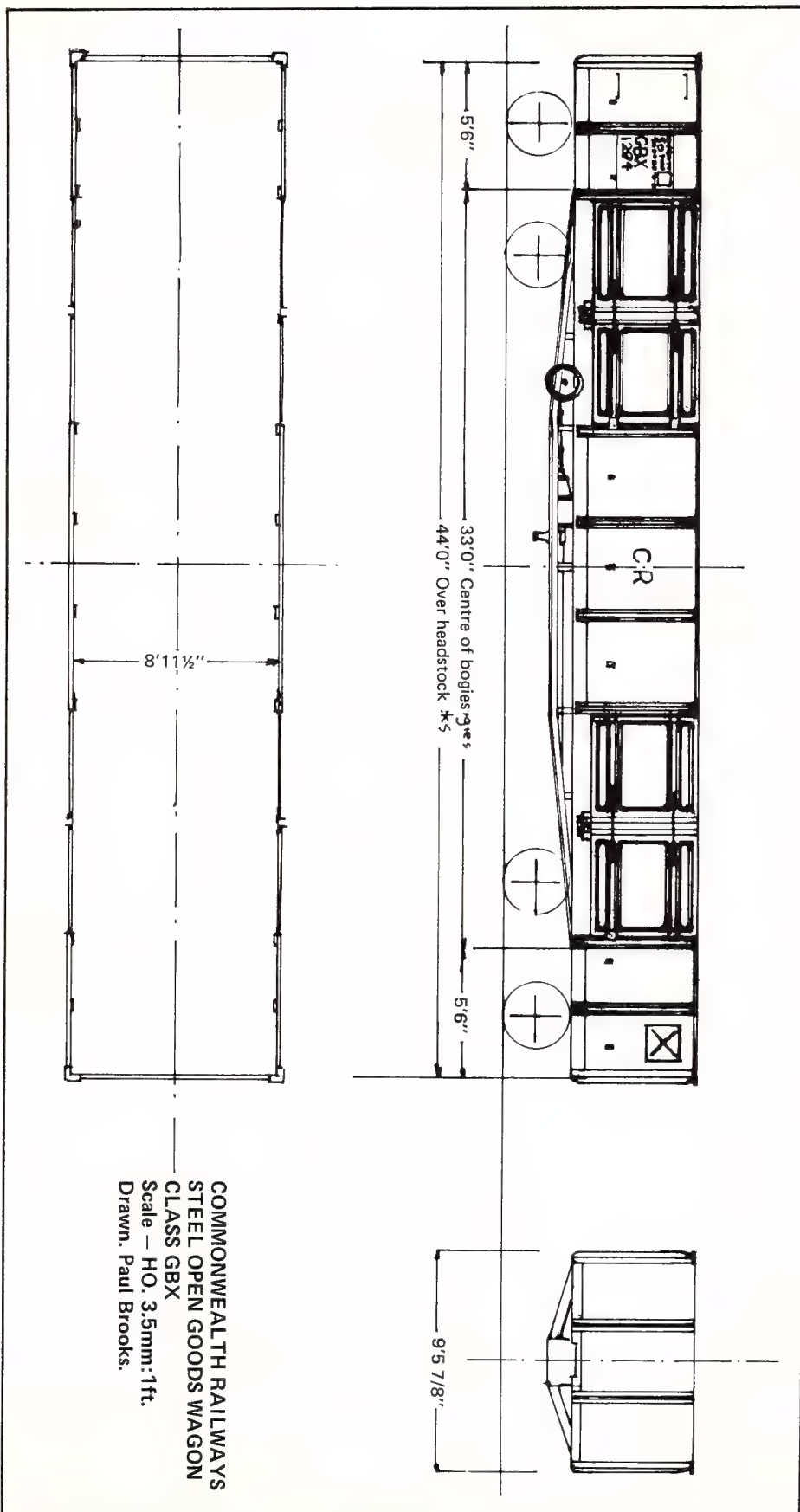
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PROTOTYPE PLAN

C.R. 'GB/GBX' open wagon.

OPEN WAGONS OF THE AUSTRALIAN NATIONAL RAILWAYS



Plan by Paul Brooks
Information supplied by the ANR

A total of 340 of these wagons were manufactured by Metropolitan Cammell in England and assembled by the Commonwealth Railways at Port Augusta between 1951 and 1956. They were given the number sequences 887-1126 and 1227-1326. Since that time the class has been reduced by conversions and scrapping to a total of 100 wagons. The following listing gives the conversions and modifications that had occurred up until July 1976.

Of a total of 340 wagons

25 were converted to GBX class for bogie interchange service

111 were converted to GH class for coal traffic
46 were converted to GHA coal wagons with a modified superstructure

16 were converted to flat wagons to carry 450 ft. lengths of welded rail on a rake of these wagons

6 were converted to NRG class flat wagons which operate on the narrow gauge

8 were converted to GF class motor body carriers

This leaves 100 GB class and 212 of the converted wagons in traffic with a total of 28 GB and derivative classes being written off. The GH and GHA classes work between Telford and Stirling North with coal from the Leigh Creek coalfields to the Port Augusta power station.

From the accompanying photos you can find several different lettering styles. The GBX wagons both have extra end bracing compared with the GB wagons. When photographed at Port Augusta in 1975 GB1074 had roller bearing style bogies which had been freshly painted with CR's orange colour. GB1090 had older style bogies where the oiled bearings had been replaced with roller bearing packages. GBX1117 has NSW 'top hang clasp brake' bogies with the outer brake shoe supports cut off while GBX1294 had VR bogies when photographed at Dry Creek in Adelaide a few years ago.

The advent of bogie exchange has brought the colour coding of bogies. Previously both VR and CR used a similar brown but the situation now is VR - brown, NSWPTC - black or blue, SAR - grey, ANR (previously CR) - orange and WAGR - yellow.

READERS AWARD.

Readers are invited to send to A.M.R.M. their selection in order, for the 3 articles that helped them most. The articles must be from the six issues of 1976 of the Australasian Model Railroad Magazine. The Author with the most votes/points will receive a well earned monetary prize.

Write now and vote for the Author who spent many hours preparing an article for your enjoyment.

A.M.R.M. P.O. Box 235, Matraville. N.S.W. 2036.

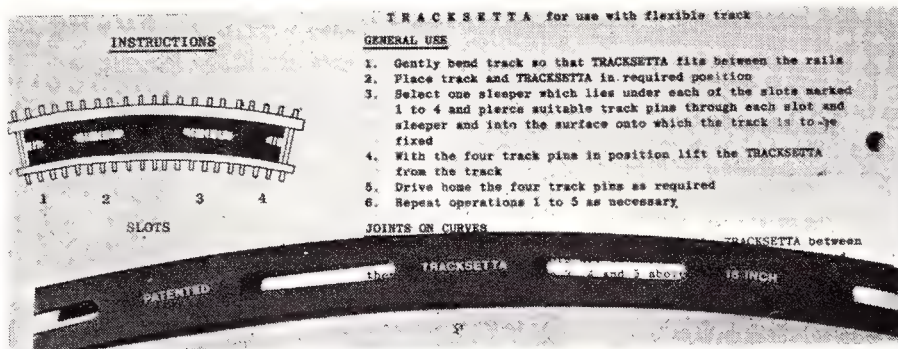


GBX 1117 at Whyalla. Note the different bracing on the end, and ▲ the NSW 'tophanger clasp brake' type bogies, which have had the outside brake hanger cut off. Photo by Phil Curnow.

GBX are converted from C.R. (A.N.R.) wagons, such as these GB class wagons. Note the different types of bogies, CR lettering style and only two braces on the visible end of GB 1074 (as in plan). ▼ Photo by Phil Curnow.



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MAILBAG

Dear Sir,

I read with interest about certain people complaining about British models painted as Australian by certain manufacturers.

Hornby market an 0-6-0 diesel shunter shown in their 1975 catalogue in VR livery. It is item No. R316. This is the standard British Railway shunting engine.

Victorian Railways actually do use this particular engine under the name of 'F' class. Information about this engine can be found on page 104 of the publication "Australian Diesel Locomotive Pocketbook". To make it an authentic model all one has to do is add coupling rod guards, chop off the buffers and add auto couplings and air hoses. It is scaled at 4 mm = 1 ft; however, it will find ready appeal to Victorian modellers who are not fussy.

Wayne Cassidy,
SUTHERLAND, NSW.

Sir,

I have just bought two bud rail cars, an RDC 2 and an RDC 3.

I would be interested to hear from anyone who knows something about bud cars being operated in Australia, also the class they operate under, and also interior fittings and seating arrangement.

J. Farrar,
16 Kinsale St,
Reservoir. 3073

Dear Sir,

In the July/August issue of AMRM, on Page 37 under the heading of "More Useful Hints", some information was given on conversion of available kit form passenger cars to other types. I make the following points.

1. Conversion of the BS to RBS or BSR requires external alteration. Three windows have to be blanked off and the sill height changed. This could be difficult with this type of material.
2. Concerning the Workshop 5 TAM kits. Conversion to EAM or XAM is merely a change in code. The alteration in the actual cars is the fitting of electric heating — loco powered for XAM and power van supply for EAM. It should be noted that this EAM is entirely different to the first series of EAM's which were a smaller car. The electrically heated EAM and KAM were normally used on the Cooma Mail and Snow Expresses.
3. Conversion of MFE and RBX is not possible because these latter vehicles would have had crown-light windows, and this feature is not present on the MFE kit.
4. NAM sleepers are used on the following trains:- Brisbane Limited Express; Gold Coast Motorail (before January, 1976); Southern Aurora; Spirit Of Progress. The LAN roomette sleeper is not all that different to the DAM and NAM externally, so using these cars and the RUB set kit, it is possible to make up a Brisbane Limited Express.
5. Other possibilities are:-

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Wishing your magazine every success.

G.J. Hughes
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WANTED

RAILWAY Modellers; July 72, Sept 72, Nov 72, Feb 73, April 73. Light Railways Magazine previous to No. 46. Good prices for good condition. Contact D. Allen, 21 Longford St, Roseville, 2069. Ph: 46 6286 (4 pm-8 pm).

AUSTRALIAN Micromodel and early Matchbox 1/75 diecasts. Please write stating description, condition and price to R. Drexel, 49 Kingsway, Nedlands, W.A. 6009.

WANTED Bergs NSWGR 48 class. State price, W. Bennett, 6/42 Wright St, Renown Park, S.A. 5008.

WANTED. Copy of June 1972 Railroad Model Craftsman (USA) any condition. Will pay \$3.00. Graham Merritt, 21 Cowap St, Nth Rockhampton, 4701.

WANTED. Second hand TT gauge locomotives — steam or diesel outline. Price and details to A. Macaulay, 77 Cameron St, Ayr, Qld 4807.

WANTED. Railway Transportation Volume 1 No. 1. State price and condition. G. Ball (02) 533 1666.

WANTED: Photographs of the following items of N.S.W. rolling stock: WHX bogie grain hopper wagons inscribed "MANILDRA FLOUR MILLS — PHONE 649-1444" on one side and "MANILDRA STARCHES — PHONE 649-1444" on the other; MLV bogie louver vans with "DAIRY FARMERS" sign;

MRC bogie refrigerator cars inscribed "NEPEAN MILK". P. Rogers, 18 Joyner Place, Flynn, ACT 2615.

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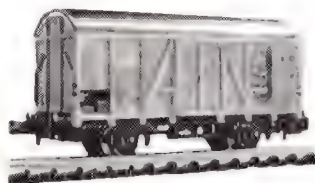
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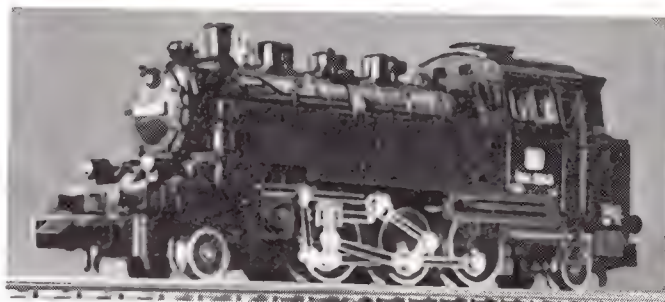
MINITRIX ^N SCALE



3523 Banana wagon

3534

Covered goods wagon



2030

BR 64 — Nick-named "Bubikopf" (bobbed hair) by railway men this loco attained a maximum speed of 90 kmh. Heusinger type valve gear.

2960

V 221 (V 200) — Most popular heavy diesel loco used both for goods and fast passenger service. Maximum speed 140 km/h.



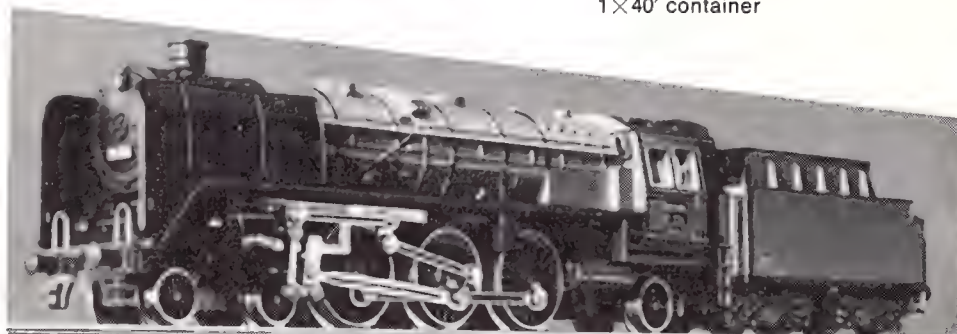
3563

Container wagon with 1×40' container



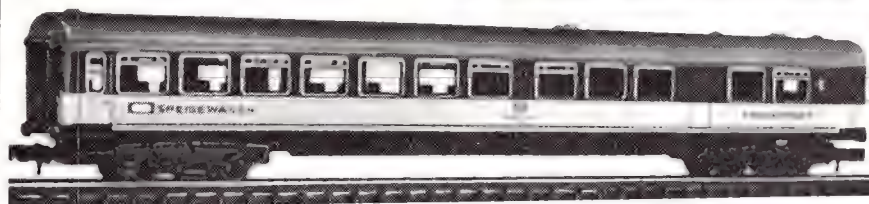
Tank wagon "Shell"

3541



2045

BR 01 — "Deutsche Reichsbahn" version of BR 01 with large smoke deflectors and original inscriptions.



Express restaurant car WR üm in grey/red livery

3093

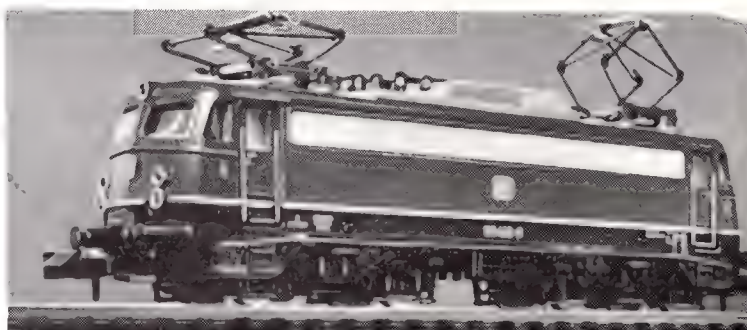
If your model railway dealer cannot supply your requirements, ask him to order your MINITRIX from:—

Australian Distributors:

KEY RYAN SALES,
4 COX PLACE,
GYMEA, N.S.W. 2227
Phone (02) 524 8855

2054

This loco is mainly used for hauling heavy freight trains. Four-axle-drive.



REVIEWS

Model Railroad Buyers Guide. Published by Boynton & Associates, 8001 Forbes Place, Suite 210D, Springfield, Virginia 22151. Price: US\$10, from the publisher.

This 258 page book, covers all scales and gauges, and lists most of the items currently available in the U.S. The publisher claims there are 250 or more lines, listing 21,000 products, and the density of the contents does not throw any suspect on these figures. Most items listed, include a price but mention is made in the text that the publishing time lag and inflation would make these a guide only.

The book has made interesting reading, many new items, not advertised in the U.S. press being bought to the fore. This book would be of interest to any modeller who is chasing the difficult-to-get item, or just looking for an idea. It would be of undoubted value to hobbyshops and importers alike, and it would be doubtful if any shop could be without a copy. As an aid for the shopkeeper, the product manufacturers address is listed, plus an added bonus being a list of U.S. railway abbreviations and factual company, an aid for any U.S. modeller.

Bob Gallagher.

N.S.W.G.R. C38 Tender kit by Friedmont Models in HO scale. Sample supplied by Berg's Hobbies, 231 Church St, Parramatta, NSW.

As this kit was an advance sample the price was unknown, and the poor instruction sheet included with the one-piece casting made no reference to the tender kit and, as such, is completely useless. Presumably the manufacturer intends to amend this omission before general sale of the kit.

The one-piece casting is to be an addition to the LIMA C38 and, as such, intended to replace the inaccurate Lima tender. The overall dimensions are quite good except for the length, which is short. The detail moulded onto the tender includes rivets, ladder, marker lamps, toolboxes, water filler lid, shovel and a good full load of coal, the latter reproducing very well.

Presumably the unit is to fit the Lima tender underframe, of which it does, but it will be necessary to remove some positional lugs from the tender base (Lima) with a file and to drill and tap the tender body so as to hold it in place, as well as to reposition the coupling between loco and tender. The only aspect which looks odd is the curvature of the tender streamlining, which is too tight.

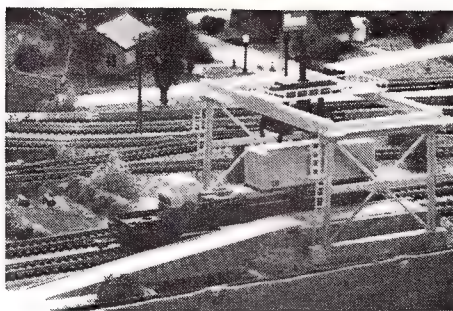
With a little work this unit would result in a more accurate tender for the Lima C38.

Bob Gallagher.

L.M.S. Ex-MIDLAND JOHNSON 4-4-0 tender locomotive kit. By **RATIO Plastic Models.** Sample supplied by **TRAIN-n-BOATS-n-PLANES**, 391 Concord Rd, Concord West, NSW. Price: \$32.50

For sometime **RATIO** have been adding to their excellent range of signal kits, and have now come up with a plastic loco kit. Most parts, in styrene, are still attached to the sprue. Wheels, also of plastic, have been plated with metal, and bearings are supplied to insert into the chassis. The parts appear to be well detailed, but the rivets seem a little coarse. Included in the kit is motor, gears and transfers for completed lettering of the kit. This would not be difficult to assemble for the instruction leaflet is most explanatory, and leaves no question. The prototype was built in 1876, there being eventually 350 in the class and the last unit was scrapped in 1934. The model would be at home pulling a four car local set as well as an express passenger set. It is a welcome relief from the numerous G.W.R. kits and while being a craftsman kit, would be a good start for the unexperienced loco builder. The kit is in 4 mm scale and has the axles set for 00 gauge.

Bob Gallagher.



LIMA CONTAINER UNLOADER. Our sample supplied by **Fantastic Model Shop, 42 Park St. Sydney.** Price \$14.95

The container unloader comes in C.K.D. form but is easily assembled. It is a simple but effective unloader designed for transfer from semi-trailer to rail wagon and vice versa. As it is hand operated, it is one of those ancillary items for a model railway which is bound to appeal to children.

Unfortunately the unloading mechanism is not able to drop low enough to handle normal ISO type containers. No doubt suitable adaptations could be made if one wished, it would then be a much more versatile piece of equipment.

The unloader contains two prime-movers, two 20' piggyback containers (i.e. fitted with wheels) and a rail wagon onto which the containers fit.

A useful addition to a modern layout.

Graham Ahern.

M n'J DECALS. HO N.S.W. Passenger Cars. Our sample supplied by the manufacturer. Available from hobbyshops under the **A.M.R.I. Accessories** label. Price: around \$1.50.

This is the second grouping to be reviewed in this range. Within this group there are 5 sub-groups and, on first impression, they all look somewhat alike. Four of the five contain coach lining strips, the fifth doesn't. The lining is good — in some cases enough to do two cars.

In each pack there is a number of car codes — different codes in each pack. Numerals are also included. The words "dining" and "sleeping" appear in certain packs. All codings and numerals appear close enough to correct size to do the job. All told there is in the vicinity of 30 different car codings in the 5 packs, thereby making the purchase of the lot a viable proposition. To list all the codings is impractical.

Somewhat pricey, but what isn't nowadays? Nevertheless, a handy product.

Allan Brown.

OLFA P-CUTTER No. 450.

A handy little gadget recently released is the Olfa P-cutter, made by the same company that makes the snap-off blade knife. It is designed for cutting plastic sheets and all laminated sheets (e.g. Formica, Laminex, etc.).

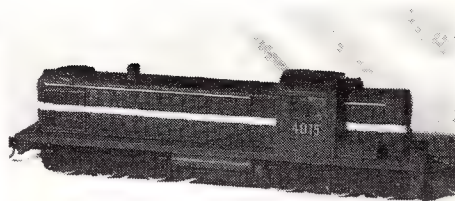
The idea is to draw the "knife" (actually it is a hooked blade) towards you, naturally using a straight-edge as a guide. It doesn't cut, it scores. After a couple of actions the material can then be snapped, causing a clean, sharp edge. 5 tungsten tip blades are included.

The beauty of this tool is that by the process of scoring only once one is able to make ideal weatherboard siding on plastic cars, structures, etc. to any width planking one desires. I picked mine up at McPhersons in Sydney, but no doubt they will be available in hardware stores in the immediate future, if not sooner. Price was \$1.92 and it's worth every cent, especially if you are a scratchbuilder. Look out for it. Same colour as the knife — yellow.

Allan Brown.

N.S.W.R. 40 class diesel electric loco body kit by Friedmont Models in HO scale. Sample supplied by **Berg's Hobbies**, 231 Church St, Parramatta, N.S.W.

The samples inspected were advance sale samples and as such, the price was unconfirmed but believed to be near \$9.70. The photo is of the manufacturers model.



The kit is of the usual Friedmont variety and still tended to be tacky (Maybe the manufacturer will write an article explaining how to work this material without leaving a fingerprint?) The quality and sharpness of detail was exceptionally good, except for the loco cab roof, which is scratched and looks coarse. Supplied with the body is a plastic footplate, pilots (2 different styles, like the prototype) and air cylinders. It is only fair to note that the air cylinders and tank on the model in the photo are incorrectly mounted and should be fully under the footplate.

Overall the detail is not bad. The overall measurement is within excepted tolerances but the cab roof profile is incorrect, and the side ventilators resemble those of a RS2 and not a RSC-3 of which class the 40 class belongs. There is also some detail on the model that is not evident on the prototype. The exhaust pipes seems to be incorrectly positioned, but there is the chance that it is differently positioned on some units to the norm.

The projected method, by which this kit is to be powered, can only be described as ingenious. The power plant is to be a Life-Like Alco C628. Provision has been made on the chassis of the kit to mount the motor and use the bogies. Admittably the wheel spacing is incorrect, but a relatively inexpensive loco, with good hauling potential can be acquired. Not recommended for the purist, but within the range of a newcomer to assemble.

Bob Gallagher.

TRACKSETTA: Gauges to aid laying track. "N" scale versions. Our samples supplied by **Alec's Hobby Shop, P.O. Box 247, Merrylands 2160.** Price: \$1.70 to \$2.10, depending on radius.

Intended for use with flexible track this is a most useful item. Available in a number of radii (9", 12", 15", 18", 24" and 36") it is possible to lay curves to a constant radius as long as enclosed instructions are followed.

They appear to be made of aluminium and are quite strong. They work best if you slide them along in the track rather than lifting out each time. Use a punch to drive track pins home. A more 'in depth' review covered this product in the last issue.

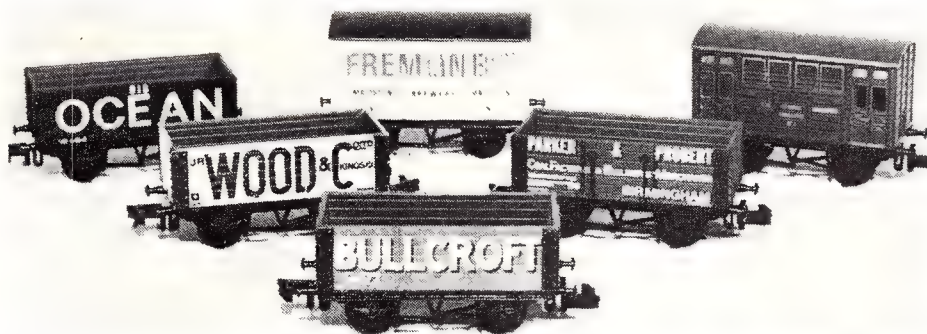
Bill Kerr.

NSWGR 219 class locomotive and tender plan by DATA SHEET. Sample supplied by **Greg Edwards, 39/46 Rainbow St, Kingsford. 2032.** Price: \$1.

The 219 (93) class 0-6-0 tender locos were introduced to the NSWGR in 1877, where, over a period of years, 50 units were delivered from Beyer Peacock. An additional 9 units, by the same builder, were taken over from local contractors and in 1882 Henry Vale of Sydney commenced delivery of a further 18 units, totalling 77 in the class. The class commenced service on the main line as a goods loco (in 1877) and finished duties at Darling Harbour in 1974. 14 of the class were converted to the A/E class, later grouped with the Z20 class.

The HO plan, to the usual high standard, has three side elevations; one representing the first units delivered, including the unusual steam dome and safety valve; the second represents the class as used prior to rebuilding; the other depicting the class in the latter days of steam. The front and rear elevation of loco and tender is of the unit in latter years. The two cab styles are represented. Two NSWPTC photos are used to illustrate the plan. There is no doubt that this plan would be of great assistance for any one scratch building a 19 or even for building a kit from. Detail is superb.

Bob Gallagher.



GRAFAR "N" SCALE WAGONS. Our samples supplied by Fybrn Models, PO Box 88, Ivanhoe, Vic. 3079. Price: \$2.60 each or \$7.80 per box of 3.

Produced in packs of three wagons, these 'N' wagons are some of an expanding range of English prototype vehicles for this gauge produced by Graham Farish. All are privately owned four wheel wagons, some of the samples being Wood and Co. Ltd., Bullcroft, Fremlin Bros.

The wagons are well detailed and the colouring and lettering is nice and sharp. Needle point axles on plastic wheels give these vehicles good rolling characteristics. Couplers are standard 'N' scale knuckle type.

No doubt a useful addition for the 'N' scale British follower.

Graham Ahern.



Adjustable loco/car holder by Scalecoat Paint. Our sample supplied by McBees Hobby Centre, P.O. Box 144, Coburg, Vic. 3058. Price \$3.95.

The object of this modelling aid is explained in its name, being a utensil that holds a loco/car whilst being painted. The main body of the unit is a section of aluminium, which has facilities to accept two zed shaped brackets, that are attached to the bogie bolster on the body of the car. An elongated slot in the main body facilitates the use of this unit for cars between 100mm and 270mm in length. The brackets are easily attached to the aluminium by wing nuts. An instruction leaflet clearly shows the full use of the unit.

Once attached to the holder it is possible to move the model in any direction, without having to touch it, and it was found to be most helpful, although it is advised to paint the underbody of the model before attaching to the holder.

It would also be possible to use the holder for holding a car, during the building process. It is pleasing to see this style of aid appearing on the market, so soon after release in the United States.

Bob Gallagher

RATIO LMS 12 ton Box Van. Sample supplied by Sans Souci Sports Store, 504 Rocky Point Rd, Sans Souci, NSW. Price: \$1.75.

This plastic injection moulded 00 scale kit comes boxed in two colours — light tan sides and ends — black undergear and roof. The instructions suggest the colour to be light grey sides, ends and roof — the rest black.

The diagrammatic instruction sheet is explicit and the construction of the vehicle is relatively easy — took approx. 1½ hours to finish (less painting of course).

Detail is clear and sharp, even to the rivets on the solebars. No transfers are included in the kit, however the instruction sheet lists the respective numbers applicable to the prototype wagons — something I have not seen done in any other kits.

Dimensions of the completed wagon are 17'9" long, 8'3" wide and 9' high (body only). Not having a plan of the prototype I was not able to compare these sizes.

The couplers are plastic dummy hooks and with the underfloor being flat no problems can be seen for the mounting of virtually any type



of coupler.

In my opinion the model needs two things to bring it up to the full operating potential it must endure and they are (a) the addition of a slight amount of weight and (b) possibly metal wheels, neither of which present any problem.

In the light of this I would consider this kit (and no doubt the rest of the range) to be top-class for their relatively low price. On their appearance, recommended.

Allan Brown.

N.S.W.G.R. C38 class locomotive and tender in HO scale. Imported from Japan by Model Dockyard Pty. Ltd. 216 Swanston Street, Melbourne. Sample reviewed was purchased from McBees Hobby Centre. Price: \$245.00

It is 13 years since the release of the first 'Dockyard 38', the HO model that can be credited with influencing the commencement of what is now Australian prototype modelling. Unfortunately over the years, as manufacturing methods and techniques improved, the detail and accuracy of the C38 model has proved to be incompatible with some of the more recent models. Thus, it is pleasing to report that the 1976 re-run of the C38 is a much improved version. Mr Peter Duckett, of Model Dockyard, commissioned Brian Parry, a noted modeller, to rework the original unit. After trying to find faults with the latest model, Brian Parry and Peter Duckett must be congratulated for a fine model.

The unit reviewed was compared with a DATA SHEET plan, held in high repute for accuracy, and the model differed slightly with the position of the pop valves and the oil lubricators, although this does not detract from the model.

Hand crafted in brass, the locomotive is adorned with fine detail produced from stampings, lost wax castings and photo engraving. Some of the more noticeable detail items include, water injectors, regulator linkage,

ERRATA

Last issue we inadvertently gave the incorrect price for the North Western Driver wheel/gear puller, supplied by McBees Hobby Centre. The price should have been \$6.30 not the advised \$3.60. We apologise to McBees and to their customers who were inconvenienced.

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twin compressor and stand, whistle, trailing truck and cylinders. Most detail items are incredibly accurate. The cab and window are correct and the cab roof and streamline coping on the tender are to the correct profile. The tender has been given special attention, and the front of the tender would compare with most good models, the steps and raised floor being a feature.

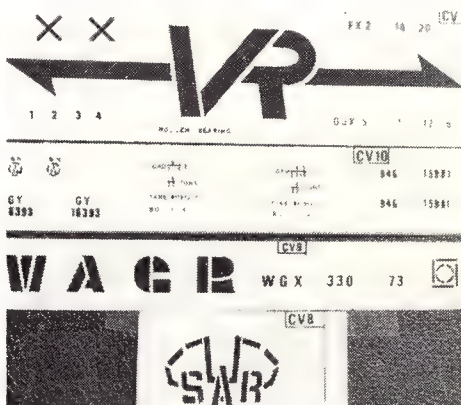
Riveting is fine, and pleasing to the eye. The unit is driven by the usual cab mounted motor that drives a gear box via a rubber tube connection. The gear box is mounted on the centre axle, all of which are sprung. The wheel profile is hard to describe for every thing appears to be correct, including the box box apparatus and the balance weights. The valve gear is fine and looks good.

There are some assembly faults, with some items being a little out of square. The unit ran as good as most brass models do straight out of the box, indicating that it was a little noisy and needs to be 'run-in'!

Regrettably by the time this review is read, most of the C38 models will have been sold, giving them a shelf life of 2 to 3 weeks. Maybe Model Dockyard will consider another re-run of this excellent model in the near future.

A photo of the model can be seen on page 4 of this issue.

Bob Gallagher.



V.R. TRANSFERS in HO scale. Our samples supplied by K.J. Hobbies, 3 Salisbury St, Coburg, Vic. 3058.

NSW has had its share of transfers and now it's Victoria's turn, but how does a biased New South Welshman review his opposition State's products? Sort of like asking a vegetarian to talk about meat! Nevertheless I'm not totally one-eyed, so here goes.

Manufactured by K.J.H. Productions, we have quite an array of numerals, motifs, emblems, etc. to satisfy even the most fastidious of V.R. prototype modellers. On hand is:- black or white large VR emblem for VLX, VSX, VHx, etc. @ 45 cents pair; white or black GY codings and numbers (even includes the infrequently modeled vehicle weight details) @ 40 cents pair; black W.A.G.R. (modern version) freight emblem and coding for WGX @ 45 cents pair; black S.A.R. freight emblem @ 35 cents pair; white V.R. coach classings, codings and numbers (AW, BW, BU) @ 40 cents pair; white Z, ZP, ZLP letters and numbers and last but not least the familiar yellow wings of the V.R. cab unit diesels.

All transfers are of the waterglide process. No instructions are included but then is there anybody nowadays who doesn't know how to apply transfers? Quality is top-class and each of the samples appears to look the correct size (comparing them with photos, natch!) — even the fine print in the GY sets can be read with no difficulty.

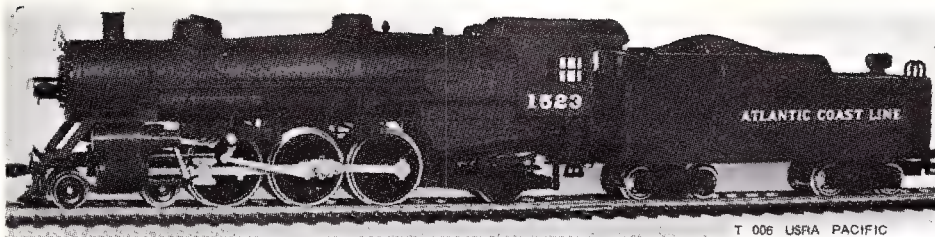
To the V.R. modeller (whichever state you live in) I would consider these transfers to be extremely good value for money. Contact Kevin and Jacque before they all go.

Allan Brown.

SHINOHARA HO/00 "UNIVERSAL" POINTS. Our samples supplied by Berg's Hobbies, Parramatta, NSW (See advert. for address). Price: \$3.95. No. 4; \$3.95. No. 6.

The latest addition to the range of pointwork manufactured by Shinohara (of Japan) is what is referred to as 'universal'.

With 'fine scale' points the distance between the frog and the wingrail is determined by an American standard and, as such, allows wheels of the same standard to track as smoothly as possible. However certain commercial equipment of other countries built yet to other standards will traverse this problem area with no noticeable difficulty, thereby shooting the whole theory down in flames. The aim of the



T 006 USRA PACIFIC

'universal' point is to accept wheels of all standards, from coarse to fine scale.

The points under review are, for all appearances sake, identical to the 'scale' point, the only difference being of course in the frog area. (See photo.) The measurement at the frog is 2mm, as against 1mm on the 'scale' point. The check rail, which in theory should also cause trouble, measures out as identical to the 'scale' point.

Rail is of the standard code 100 and sleeper height, etc. is all, as previously stated, identical to the 'scale' point.

The points are of the self isolating variety, the current being directed to the route selected. There is no locking device as such on any of the Shinohara range therefore a positive lock, by means of an electric solenoid or the more common hand throw, is recommended.

The points will mate with most of the set-tracks (of code 100 rail) currently available. They will not mate with Hornby (Triang).

Through an intensive testing I was determined to find something that would not run through them. Regrettably I was defeated and can state that everything on the market today is acceptable to those points, even to a very old Triang loco I have.

The points are available in No. 4 and No. 6 (both left and right) but, no doubt, the range will be increased.

To the coarse scalers who want that fine scale appearance you now have it in these points.

Allan Brown

TESTORS PLASTIC CEMENT. Our sample supplied by Trains 'n Boats 'n Planes, 391 Concord Rd, Concord, NSW.

This glue comes in a small cubed shaped bottle of approx. 1½" thereby lessening the chances of knocking it over. The lid is of approx. ¾" diam. with a small brush attached, similar in size to the brushes in nail polish bottles. Contents is 1 oz. The label is clearly marked "Danger - Poison - Flammable" etc. but omits the major factor - "use in well ventilated room".

The glue has characteristics similar to the MEK based glues, i.e. it flows freely, sets reasonably quick and dried rock hard. The applying brush is much too heavy, especially when the instructions state to use sparingly.

According to the label this glue contains methyl isobutyl ketone and methyl cellulose acetate. Whatever these chemicals are they smell like very strong nail polish remover, and when I say strong I mean strong.

I tested this glue in my workshop, naturally with the window open (not mentioned on label) and after possibly 3-4 minutes began to get dizzy and nauseous. The large aperture in the bottle seems to let the fumes out too quickly.

Although this glue may have good working features I would state that, as a result of its very strong fumes, it could be potentially dangerous to the novice, especially when working in an enclosed room. On this basis I will not recommend it to anyone but the experienced.

Allan Brown

USRA PACIFIC 4-6-2 loco and tender, by MECHANOTEHNKA. Our sample was supplied by the importers, A.M.R.I., P.O. Box 160, Mermaid Beach, 4218. Price: \$27.50.

This must be the best value for money Pacific loco on the HO market. Basically a plastic model, this unit differs from most as the detail is not excessively coarse. Admittably handrails and pipes do not stand out of the boiler, but again they do not look out of place. Shod in metallic wheels, which are wide in tyre, the flange depth is less than 1mm. The valve gear, out of character, is coarse and operates into plastic cylinders. The body, which includes a working headlight, is detachable from the chassis by means of one (hidden) screw found under the leading truck, and reveals a powerful 3 pole motor driving a meshed gearbox via a universal. All driving wheels have sufficient vertical movement to allow for average track undulations. A lead-formed weight fills the

boiler and provides traction. The unit is fitted with a useless dummy fixed coupler up front, and with a LIMA styled unit on the tender, the latter allowing for conversion to alternative couplers.

There is some doubt to the accuracy of this model to the USRA Pacific, but the wheel arrangement/size/spacing is spot-on for a South Australian 600 class. (In fact it is surprising it is not listed as such, for by comparison, it is closer to a S.A.R. 600 than most repaints are to their supposed representation). This unit would be an ideal base for a manufacturer to build a 600 class body and break into the South Australian market. (The driving wheels are 21mm dia, front pony 9mm and rear pony 14mm). By comparison the loco performs admirably hauling, without rubber tyres, a heavy load equivalent to 16-4 wheelers up a 1:50 grade drawing a maximum 0.26 amp at 12v D.C. Using the Locotronic test, (reviewed last issue) it will crawl over 36 inches in 17 seconds. The fact that the loco does not use the tender for pick-up assists in the responsive feel the loco has. Outshopped in three roadnames (Baltimore & Ohio, Atlantic Coast and Missouri Pacific Lines) this would have to rate as the 'buy' of 1976.

Bob Gallagher.

LIMA "N" scale Australian outline container wagon. Our sample supplied by Fantastic Model Shop, 42 Park St, Sydney. Price: \$3.98.

Intended no doubt to represent a NSW 'OCX' container wagon this latest LIMA offering is really quite close, as follows:-

	LIMA	OCX
length	62"	63"
width	7' 9"	8'
height	4' 3"	3' 10"

This wagon has extremely good rolling characteristics and is of all metal construction as far as the flat goes (nice low centre of gravity). Three 20" containers (plastic) are included lettered for TNT, RACE and ACL. Certainly makes life a bit easier for the Australian prototype modeller and with a little bit of work on the underframe and bogies a closer replica would result - good value.

Bill Kerr.

Alco GE 1000 HP Diesel Loco by Mehanotehnika in HO scale. Our sample from A.M.R.I., P.O. Box 160, Mermaid Beach, 4218. Price: \$15.50.

In essence, this model was reviewed last issue, the only difference being the box it was delivered in, the brand name and the price (\$6.00 cheaper). For many years now the Mehanotehnika range has only been available to Australians via the Life Like, and AHM brand names. As both brands are exported from Yugoslavia to the U.S. and then to Australia, it is only natural that the direct importation into Australia from Yugoslavia would reduce the cost, and of course the retail price.

Driven by a single power truck (having a wheel base of 34mm) the unit is not exceedingly powerful and could only haul 6 'heavy' vehicles up a 1:40 grade, however it has a smooth powerful low speed on the flat, covering 36" in 22 seconds and having a maximum current of 0.24 amp at 12 volts DC. This unit has a bogie centre of 72mm and is readily converted for use as a power plant for other models. In a day of inflation, value.

Bob Gallagher.

ROCO "N" scale No. 6 electrically operated points. Our sample supplied by Trains 'n Boats 'n Planes, 391 Concord Rd, Concord West, NSW. Price: \$12.60 per pair.

Quite a well made point this, it is interesting to note that although the solenoid is mounted on the side it is not unsightly - rather resembles a track relay. Operation of point is very positive - possibly the only drawback is the long plastic frog which makes operation of short wheelbase locos (0-4-0's mainly) a bit difficult.

Overall height of point is comparable to other brands - construction-wise fairly standard as well - plastic sleeper base and nickel-silver rail.

Comes complete with three colour-coded wires and plugs attached for operation with momentary contact switch which is available separately. All available brands of rolling stock appear to have no trouble with this point clearance-wise.

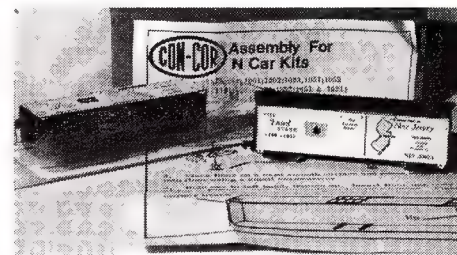
All in all quite a reasonable unit.

Bill Kerr.

FLEXIGRIT FINE FINISHING FILM. Our sample supplied by The Signal Box, 129 Bell St, Coburg, 3058. Price: 60 cents per packet of five.

This name is somewhat of a misnomer. In actual fact the product is plastic sandpaper. There are 5 different grades in the packet. All grades are extremely fine (more so than wet and dry) and are ideal for treating surfaces which will require a perfectly smooth finish. I used this product on the sides of a scratchbuilt styrene coach prior to painting. It left no visible scratch marks as do certain grades of sandpapers. It is ideally suited to plastic modelling and for this purpose I consider it to be quite a handy product.

Allan Brown.



CON-COR 'N' Gauge American Bi-Centennial Box Cars. Our samples supplied by Alce's Hobby Shop, shop 6 McFarlane Mall, Merrylands, NSW. Price: \$52.00 per set of 13 cars (\$55.00 posted).

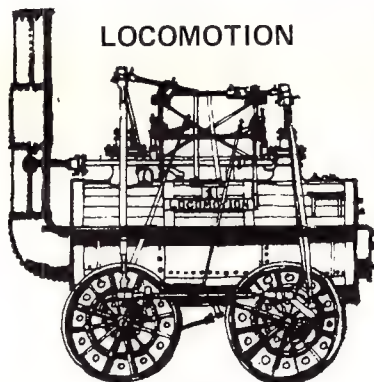
Yet another entry into the increasing range of items to a bi-centennial theme these wood sided box-cars would make an attractive showpiece. Supplied as a kit they are quite easy to assemble - one piece plastic body (painted and lettered) with roof-walk and brake wheel attached, cast metal underframe (gives low centre of gravity), Bettendorf type talgo trucks, wheelsets and kingpins. Instructions are supplied with each kit. Wheels are of a very small profile - much better than usual 'N' standards - and very free running. All in all a quality item.

Bill Kerr.

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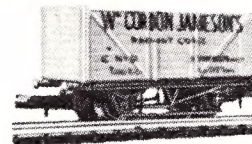
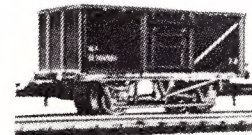
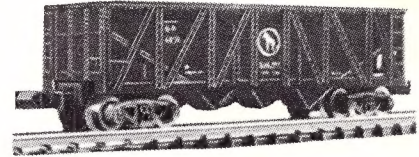
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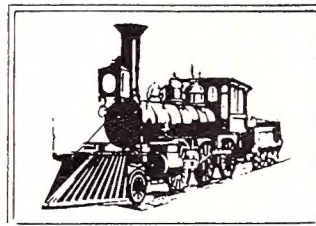
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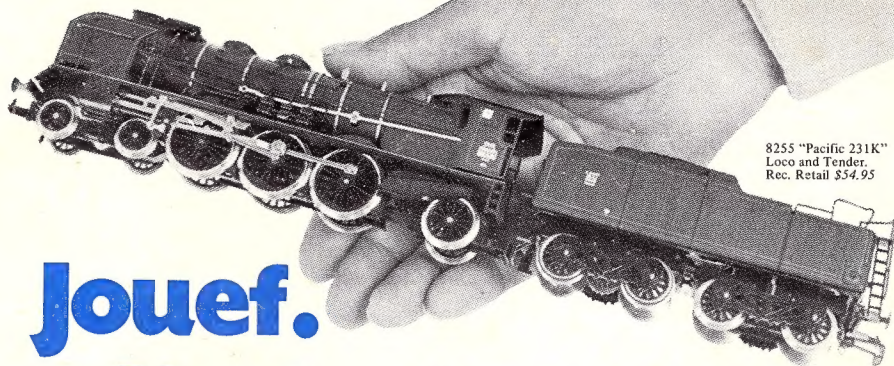
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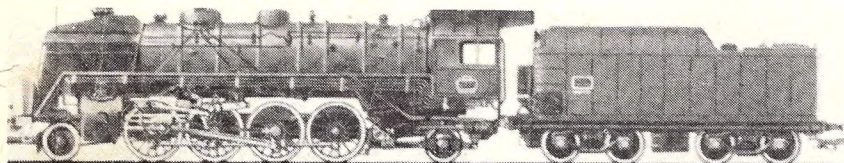
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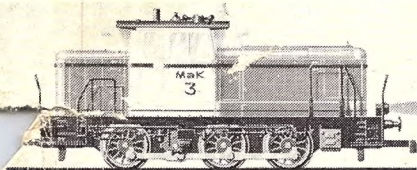
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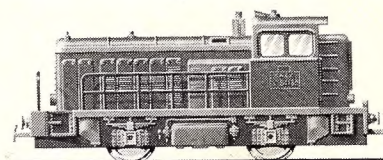
8274 Mikado Loco and Tender
Rec. Retail \$39.95



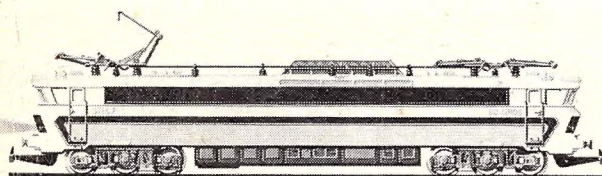
8527 MAK Diesel Hydraulic loco
Rec. Retail \$20.95



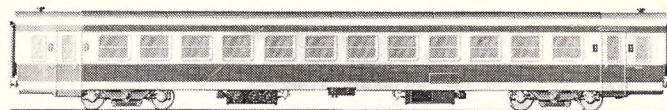
8283 140C Loco and tender
Rec. Retail \$27.95



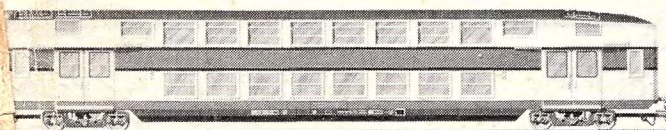
8501 020 Y Diesel Shunting loco
Rec. Retail \$11.50



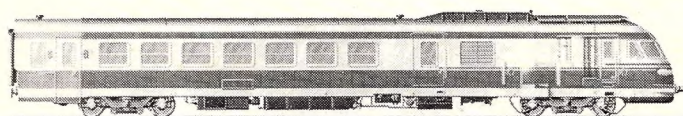
8451 CC 40108 Electric loco
Rec. Retail \$22.50



5492 TurboTrain 1st/2nd Class Coach
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Rec. Retail \$9.50



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